

# WHO Eritrea Biennium Report 2020 - 2021



Consolidating  
Achievement of UHC  
in Eritrea





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## Biennium Report 2020 - 21: Journey towards GPW13 Goals through the achievement of UHC in Eritrea

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## Foreword



**Dr Martins Ovberedjo**  
**WHO Country Representative, Eritrea**

Eritrea is one of the few countries that achieved the health-related Millennium Development Goals (MDGs) and is building on the successes of the MDGs to continue towards the achievement of Sustainable Development Goals (SDGs). The country has made significant progress towards the achievement of SDG 3 targets including a gain of 20 years in life expectancy from 48 years in 2000 to 68 in 2020; Increase in Universal Health Coverage (UHC) service coverage index from 47.6% to 54.9% between 2016 and 2021; reduction in under 5 mortality rate, infant mortality rate and neonatal mortality rate by 75%, 68%, 49% respectively from 1990 to 2020; Decreased incidence and prevalence of major communicable diseases like TB, Malaria and HIV.

This biennium report highlights WHO contribution to public health development in Eritrea in the biennium 2020-2021. The country aspires to modernize the health services including implementation of strategies to strengthen resilient and comprehensive public health service for the benefit of the Eritrean population. WHO focused on supporting these national aspirations for the country and the support aligns to WHO's GPW13 Goals and strategic mission to promote health, keep the world safe and protect the vulnerable.

The WHO Country Office (WCO) supported the Ministry of Health and partners in implementing SDG 3 with emphasis on Universal Health Coverage (UHC) ensuring that no one is left behind. Despite the COVID-19 pandemic, WCO continued to support the country in all necessary areas having activated the business continuity plan. WCO supported the country technically in areas of continuity of essential health services

and provision of necessary guiding documents and literature towards COVID-19 response. During this period WCO supported the Ministry of Health in the conduct of the HSSDP II midterm review, development of the new National Health Policy and the Health Sector Strategic Development Plan (HSSDP III) 2022-26 and elaboration of the Essential Health Care Package (EHCP). WHO also supported development of the following important technical products: HIV, Tuberculosis and Malaria strategic plans review; development of the Global Fund funding request for HIV, TB, and Malaria; RMNCAH programme review and development of the new RMNCAH strategic plan and EPI programme review and development of the National Immunization Strategic Plan among others. In addition, WCO provided technical support in the development of the MOH COVID-19 response plan as well as the response plan for the UNCT as a way of protecting Eritrean populations from health emergencies.

The health sector in Eritrea enjoys strong political commitment from high level including use of domestic resources by Government and leadership for health development at relevant levels of the health system. These have been the enablers for the achievements the country has had in health. Other factors that have enabled these achievements include: (1) strong community involvement, contribution, and ownership for health, (2) responsive subnational health systems, and (3) health workforce at all levels.

While WCO also enjoys very good working relationship with the MOH and national authorities, development partners and the UNCT, the absence of a formal multisectoral coordination mechanism for SDGs hampers speedy implementation of planned activities. The country also faces challenges and outstanding issues include adequacy of skilled health personnel, financing the HSSDP III fully, availability of quality up to date population-based data, not fully developed district health offices and logistical challenges in delivering health services especially in hard-to-reach areas. The WCO plans to augment programme implementation actions to achieve the GPW 13 objectives in the next biennium through the continued implementation of the WHO Triple Billions and supporting the country in implementing the HSSDP III.

Let me take this opportunity to commend WCO staff members for their diligence and hard work, the Ministry of Health for their confidence and trust in WHO, the UNCT for their collaboration, the donors and development partners, and WHO AFRO and HQ for their non-ceasing support.

## Acronyms and Abbreviations

ACPR	Adequate Clinical and Parasitological Response	EVD	External Ventricular Drain
ADR	Acquired HIV Drug Resistance	FGM	Female Genital Mutilation
AEFI	Adverse Event Following Immunization	GAVI	Global Alliance for Vaccine and Immunization
AFP	Acute Flaccid Paralysis	GIS	Geographic Information System
AFRO	Regional Office for Africa	H1N1	Hemagglutinin Type 1 and Neuraminidase Type 1
AIDS/STI	Acquired Immune Deficiency Syndrome- Sexually Transmitted Infections	HCT	HIV Counseling and Testing
AL	Artemether-Lumefantrine	HIV/AIDS	Human- Immune-Deficiency Virus/ Acquired Immune Deficiency Syndrome
ALMA	African Leaders Malaria Alliance	HMIS	Health Management Information System
ANC	Anti-Natal Care	HPV	Human Papilloma Virus
ART	Antiretroviral Therapy	HR	Human Resource
ASAQ	Arte-Sunate-Amodia-Quine	HRP	Histidine Rich Protein
AU	African Union	HSSDP	Health Sector Strategic Development Plan
AYPFHS	Adolescent and Young People Friendly Health Services	ICT	Information Communication Technology
BCP	Business Continuity Plan	IDSR	Integrated Disease Surveillance Response
CCM	Country Coordination Mechanism	IHR	International Health Regulations
CDCP	Centers for Disease Control and Prevention	IMNCI	Integrated Management Neonatal and Childhood Illnesses
CERF	United Nations Central Emergency Response Fund	IRS	Indoor Residual Spray
COVID-19	Corona Virus Disease-19	IVM	Integrated Vector Management
DAO	Delivering As One	JEE	Joint External Evaluation
DDT	Dichloro-Diphenyl Trichloroethane	JICA	Japan International Cooperation Agency
DFATD	Department of Foreign Affairs Trade and Development	KEMRI	Kenya Medical Research Institute
DFC	Direct Financial Cooperation	KPI	Key Performance Indicator
DFID	Department for International Development	LF	Lymphatic Filariasis
DHIS	District Health Information System	LLIN	Long lasting Insecticide Net
DPG	Development Partners Group	MCH	Maternal Child Health
DRS	Drug Resistant Survey	MDA	Mass Drug Administration
ENASP	Eritrean National Aids Strategic Plan	MDGs	Millennium Development Goals
EOC	Emergency Operations Centre	MDR	Multiple Drug Resistance
EPI	Expanded Program on Immunization	MIS	Malaria Indicator Survey
ERP	Emergency Response Framework	MLHW	Ministry of Labour and Human Welfare

MOH	Ministry of Health	REC	Reach Every Child
MPDSR	Maternal, Perinatal Death Surveillance and Response	RED	Reach Every District
MTB/Rif	Mycobacterium Tuberculosis/ Rifampicin	RO	Regional Office
NAPHS	National Action Plan for Health Security	SAM	Semi Annual Monitoring
NCC	National Certification Committee	SANA	Situational Analysis and Needs Assessment
NCDs	Non-Communicable Diseases	SARA	Service Availability and Readiness Assessment
NHP	National Health Policy	SCH	Schistosomiasis
NMR	Neonatal Mortality Rate	SDG	Sustainable Development Goals
NORAD	Norwegian Agency for Development Corporation	SOS	Sustained Outreach Services
NPEC	National Polio Expert Committee	SDCF	Sustainable Development Cooperation Framework
NPHEMC	National Public Health Emergency Management Committee	STH	Soil Transmitted Helminthiasis
NPT	National Philanthropic Trust	TB	Tuberculosis
NRS	Northern Red Sea Region	DOTS	Direct Observation Treatment
NTDP	Neglected Tropical Diseases Programme	TET	Therapeutic Efficacy study
NTDs	Neglected Tropical Diseases	TM	Traditional Medicine
OPV	Oral Polio Vaccine	UHC	Universal Health Coverage
PB	Programme Budget	UN	United Nations
PBM	Pediatric Bacterial Meningitis	UNCT	United Nations Country Team
PCR	Polymerase Chain Reaction	UNEP	United Nation Environment Programme
PCT	Preventive Chemo-Therapy	UNFIP	United Nations Foundation
PDR	Pre-treatment HIV Drug Resistance	UNFPA	United Nations Population Fund
PHC	Primary Health Care	UNICEF	United Nations Children's Fund
PITC	Provider Initiated testing and Counseling	UNOPS	United Nations Office for Project Services
PLDH	Plasmodium Lactate De-Hydrogenase	USAID	United States Agency for International Development
PMDS	Performance Management Development System	WCO	WHO Country Office
PMTCT	Prevention of Mother to Child Transmission	WHO	World Health Organization
POE	Point of Entry	WHO/HQ	WHO/ Head Quarters
QC\QA	Quality Control and Quality Assurance	WHO-PEN	WHO Package for Essential NCDs
RDT	Rapid Diagnostic Test	Zoba	Districts/Region
RDTs	Rapid Diagnostic Tests		

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Above: H.E. President Isaias Afwerki, President of the State of Eritrea (right), Ms. Amakobe Sande (UN Resident Coordinator - centre) and Dr. Martins OVBBEREDJO (WHO Eritrea Representative - left).

On the occasion of the presentation of letters of accreditation by Ms. Amakobe Sande the UN Resident Coordinator to Eritrea, to His Excellency Isaias Afwerki, President of the State of Eritrea. WHO Country Representative, Dr. Martins OVBBEREDJO, accompanied Ms. Sande and discussed bilateral health issues with His Excellency.

# 1. Introduction

## 1.1 Background

This report presents the achievements of the World Health Organization Country Office (WCO) for Eritrea for 2020 and 2021 and reflects the support provided to the State of Eritrea to improve health outcomes. WCO Eritrea’s work was conducted in accordance with the National Health Policies and is implemented through the CCS five-year strategic plan that is aligned to the National Health Sector Development Strategic II (HSSDP II 2017- 2021) and the UNSDCF 2022 - 2026. Operating under the oversight of the World Health Organization Regional Office for Africa, the work of the WCO Eritrea is guided by the Africa Health Transformation Programme 2015–2020: A vision for Universal Health Coverage, for a more responsive, effective and transparent realization of the Sustainable Development

Goals (SDGs). WHO’s Thirteenth General Programme of Work, 2019–2023 (GPW 13), adopted by the Seventy-first World Health Assembly in May 2018, reflects the global urgency to accelerate the attainment of the SDGs and reduce health inequity among all populations. WHO’s interventions in the country have thus been conducted to match the three interconnected global strategic priorities that aim to ensure that one billion more people have universal health coverage, one billion more people are better protected from health emergencies and one billion more people enjoy better health and well-being through the attainment of the health-related SDGs. The figure below summarizes WCO’s priorities and targets based on the HSSDP II 2017- 2021 , the Africa Health Transformation

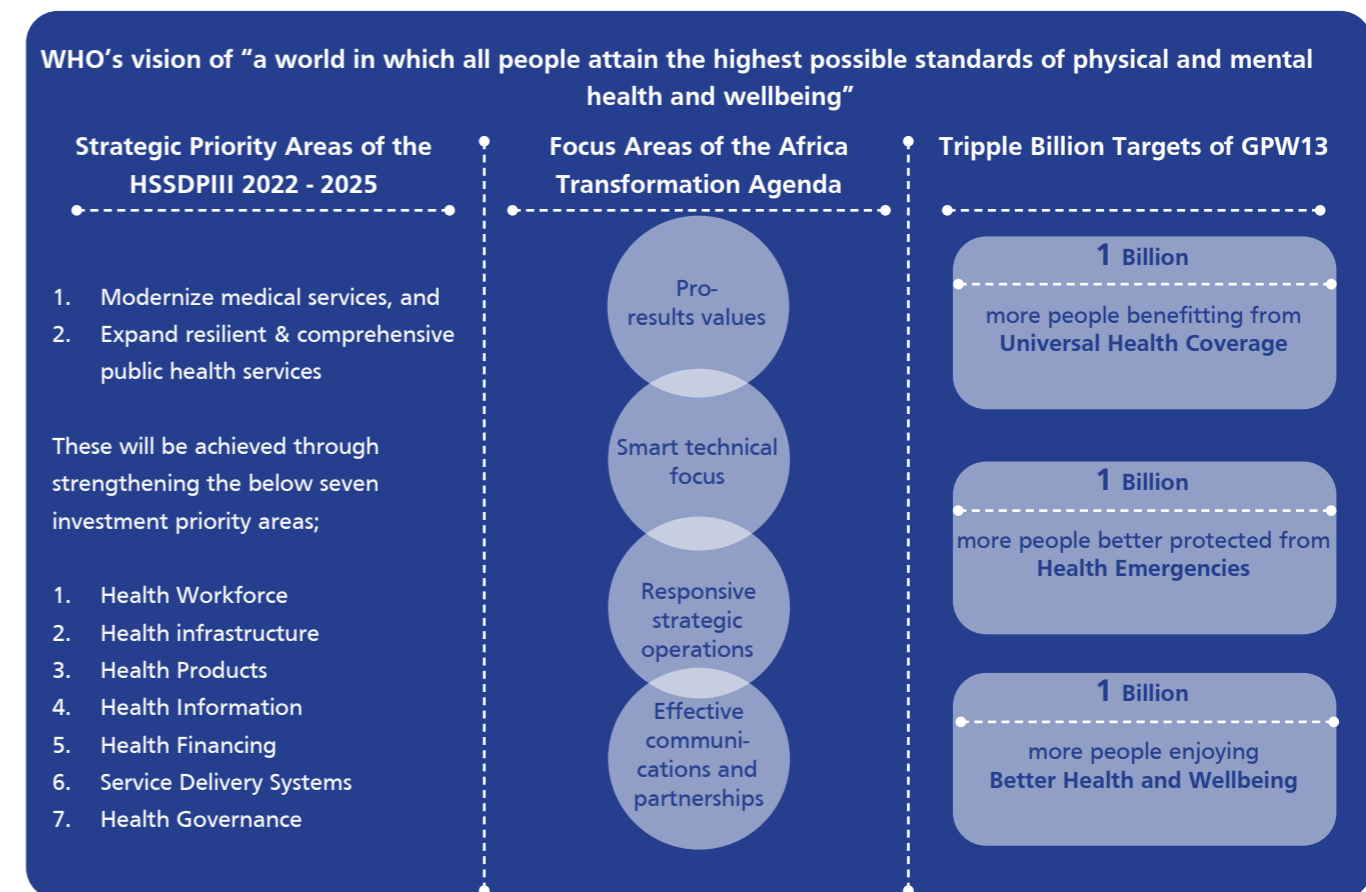


Fig. 1. Overview of WCO priorities and targets at local, regional and global levels

Fig. 2. HSSDP III results framework

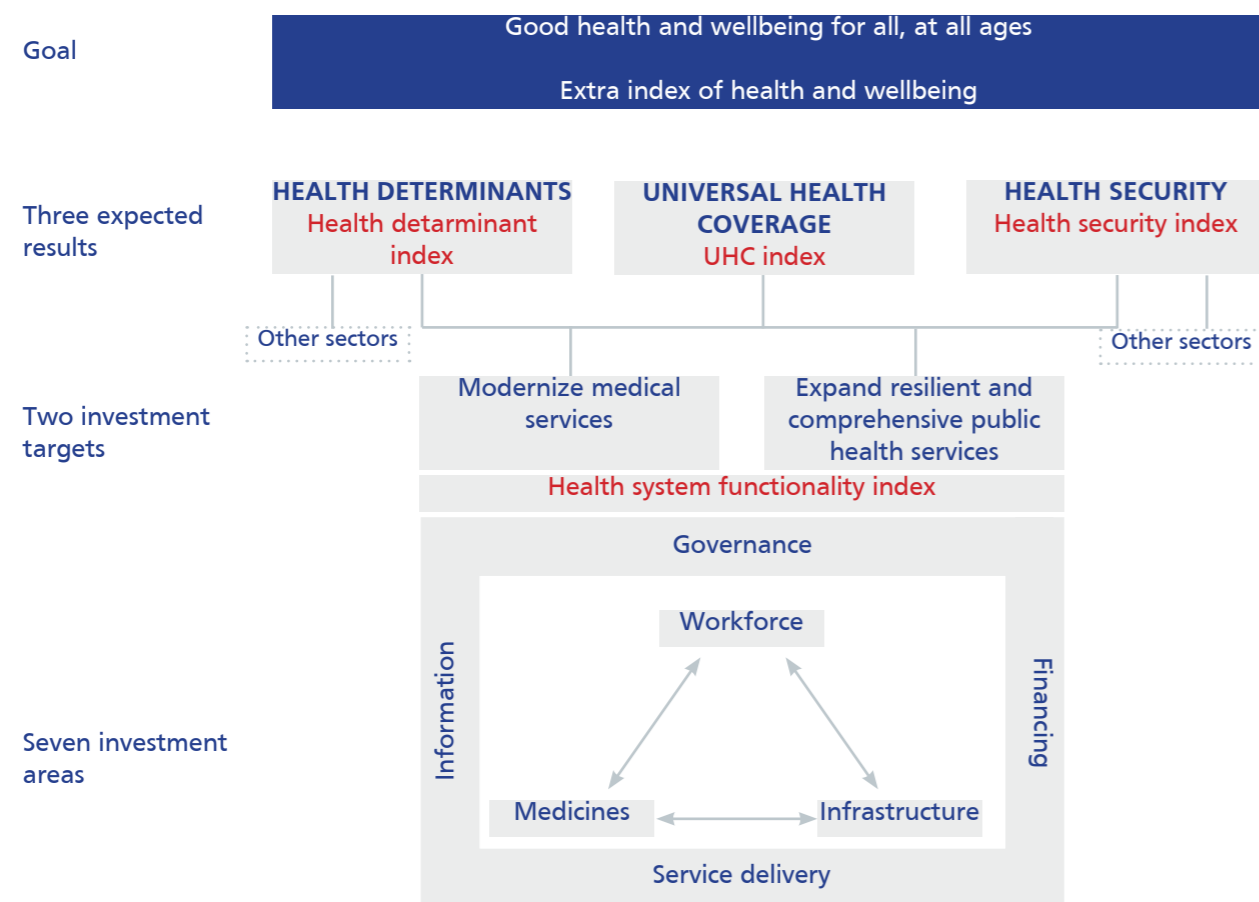


Fig. 3. Priority Interventions



## 1.2 Eritrea at a Glance



This map used above, whether dotted and or with dashed lines represent approximate border lines for which there may be or may not yet be full agreement. The use of the map does not in any way imply an endorsement by the WCO Eritrea Country Office. © UN in Eritrea/2021

NSO report further indicates that Eritrea has a very young population, with 49.2 percent under the age of 15. The country operates a dual administration system: national and regional or Zoba levels. Zobas are the primary geographic divisions through which Eritrea is administrated. With six in total, and include the Anseba, Maekel (Central), Debub (Southern), Gash-Barka, Northern Red Sea and Southern Red Sea. Gash-Barka is the most populous, while the capital city, Asmara, is in the Maekel Zoba.

As part of its legal framework, Eritrea has enacted numerous regulations and laws dealing with nationality, monetary and banking systems, the fiscal and financial system, transport and communications, health, national security, education, social welfare, land tenure, mining and energy, management, and privatization of public enterprises, along with fisheries. There are registered national unions for women, youth, and students, as well as workers, through the National Union of Eritrean Women, the National Union of Eritrean Youth and Students, along with the National Confederation of Eritrean Workers, respectively.

Programme 2015–2020 and GPW 13 Eritrea is situated on the western shore of the Red Sea with a total land area of 124,000 km<sup>2</sup> and coastline spanning 2,400km including its archipelago of islands. The country has six major agro-ecological zones; moist and arid lowlands, semi-desert, moist and arid highlands, and sub-humid micro-catchment areas on the eastern escarpment. It exhibits a varied topography, rainfall and climate with altitude that ranges from 120 meters below sea level to over 3,000 meters above sea level.

The country’s vision is consistent with most goals of the SDGs: prosperity (SDG 3- Health, 8- Decent Work and 9 – Industry, Innovation, and Infrastructure); eliminate hunger (SDG 2), poverty (SDG 1), illiteracy (SDG 4), gender equality (SDG 5), national harmony (Goal 10 – Reduced Inequality, 11-Sustainable Cities and Communities), Peace, Justice and Democracy (SDG 16); and Goal 17 on partnership and international cooperation. The vision also aligns (though not clearly spelled out) with SDGs 6 – Clean Water and Sanitation among other SDGs relevant to prosperity and national harmony.

Eritrea is one of the youngest countries in Africa, having achieved independence in 1991 with a similar demographic pattern to many countries on the continent. Its 3.65 million population<sup>1</sup> mostly resides in rural areas, at about 65 to 70 percent according to the National Statistics Office (NSO) Report of 2015. The

<sup>1</sup> National Statistics Office Report, 2015

### 1.3 The Eritrean Public Health System

The health sector in Eritrea is guided by the National Health Policies and is implemented through five-year strategic plans. At the present, the Health Sector Development Strategic II (HSSDP II 2017- 2021) is under implementation. In addition, program-specific strategic plans such as Reproduction Maternal Neonatal and Child Health (RMNCAH) and Human Resources for health (HRH) have been developed in alignment with the HSSDP II.

The Health Sector Strategic Development Plan-II (HSSDP II) 2017 - 2021 has been completed with monitoring and evaluation (M&E) plan. This strategy has adequately addressed the key dimensions of UHC. It emphasizes a whole-of- system approach; factors in health system resilience at all levels and considers the SDG goals, health security (epidemics, pandemics, and disasters, both man-made and natural induced) and cross-cutting issues such as water and sanitation (WASH), workplace safety and climate change.

The nature and focus of required health services in Eritrea has evolved significantly over the years. While communicable diseases continue to be a major problem, additional challenges including non-communicable diseases (NCDs) which are partly being fueled by globalization and changing lifestyles and road traffic accidents (RTAs) are a concern, thus changes in policies are needed to address them. The NCD burden is particularly related to non-communicable diseases, including diabetes, hypertension, cancer, chronic respiratory diseases, and cardiac diseases, which share common risk factors that include tobacco use, unhealthy diets, physical inactivity, and harmful use of alcohol.

Meanwhile, the reductions in mortalities associated with many previously high priority diseases like HIV and Malaria is improving overall survival rates. However, Eritrea is faced with emerging complex issues that have a direct effect on health. These include:

1. **Demographic transitions:** The country is witnessing decreasing mortality and fertility, migration and increasing life expectancy which has resulted in an increase in the proportion of the elderly population
2. **Epidemiologic transitions:** Eritrea is facing a triple disease burden, with a significant increase in non-communicable diseases and injuries coupled with the existing communicable diseases burden
3. **Socioeconomic transitions:** following the signing of the Joint Declaration of Peace and Friendship between the State of Eritrea and the Federal



Democratic Republic of Ethiopia in 2018, which has led to the resumption of diplomatic, political, and economic relations, Eritrea is now faced by the reality of cross border health care systems and issues, globalization, and unplanned urbanization, which have the potential to impact on the health care systems.

4. **Health security threats:** Eritrea needs to develop and strengthen its core capacity for emergency preparedness and response and for implementing the International Health Regulation (IHR).
5. **Environmental threats:** Globally, climate change has resulted in changing disease epidemiology, with infectious diseases recurring in areas where they had previously been eliminated. In addition, climate change, which has resulted in changing patterns of rainfall as well as man-made and natural induced shocks and disasters have affected food security leading to an increasing burden of malnutrition

### 1.4 Universal Health Coverage: Improved access to Quality Essential Health Services



Above: A doctor taking an ultrasound examination at Hazhaz Hospital

The current estimate of UHC service coverage for Eritrea is 54.9 (WHO) and the country has been striving with more emphasis and focus, to strengthen health systems for UHC.

2020, a midterm review of the HSSDP II was conducted and the report finalized. The annual review of the health sector is conducted at the Regional/Zoba level, with the Honorable Minister, Director Generals (DGs), partners attending the meetings.

#### 1.4.1 Health Governance

As one of the focus countries of the WHO Regional office for Africa (AFRO) Flagship program on UHC, an initial scoping mission was conducted in Eritrea in 2017 upon which a UHC roadmap was developed. Recommendations were made on governance including the need for the development of a National Health Policy, national health laws and the establishment of sustainable development goals (SDG) steering mechanisms.

The country has recently finalized the NHP (2021) and planned to undertake the development of the National Health Law after that, to ensure all subject matters that need legal tools in the NHP are reflected in the National Health Law. The UHC roadmap is regularly monitored and evaluated at the central level, with the Honorable Minister for Health chairing the meeting. The HSSDP II is translated into operational plans implemented at the Zoba levels, in collaboration with all key stakeholders and programs. In the first quarter of



Above: MOH Senior leadership providing strategic direction during the review meeting of the Health Sector Strategic Development Plan (HSSDP II) and subsequent adoption of HSSDP III in Eritrea. The MOH team was led by Dr Andebrhan Tesfazion, acting Director General of Public Health (sitting at the middle), Dr Goitom Mebrahtu, Director of Health Services (second left), Mr Yemane Haile, Director of Monitoring and Evaluation (first right) and Dr Berhana Haile, Director of Family and Community Health Division (extreme left).



## Major Achievements



### National Health Policy

The national health policy 2010 has served the country over the last decade. More recently, with the support of WHO, the Ministry of Health (MoH) has developed a new National Health Policy (2021), in line with the SDGs, UHC and considering the current COVID-19 pandemic.



### District Health Systems Strengthening

At the regional level, there are 6 Zonal (Zoba level) MoH branch offices. The sub-Zoba or District Medical Offices are in being implemented in a phased manner, with District Health Management Team (DHMT) established in 23 sub-Zobas. In 2020, an additional 35 districts have been targeted, with procurement of computers, printers, and computer desks in pipeline for each district.



### Midterm Review Report

The midterm review (MTR) of the Health Sector Strategic Development Plan II (2017-2021) was conducted and the report finalized in the first quarter of 2020. The MTR noted that there is good progress in addressing communicable diseases (HIV, Tuberculosis and Malaria), and great EPI coverage across the nation. However, accelerated high impact interventions in RMNCAH are critical as well as in Non-Communicable Diseases.



### Fifth Regional Forum on Health Systems Strengthening (HSS) For UHC and other Health SDG Targets

The Regional Forum is an annual assembly of the top-level technical decision makers from the 47 Member States comprising the WHO African Region, who meet to deliberate on emerging issues relating to health systems development in the context of Universal Health Coverage and other health related SDG targets. The WHO supported a team comprised of Director Generals and Directors from the MoH to participate in the forum. Furthermore, the WHO Country office (WCO) technically supported Eritrea's presentation construction, through active leadership, data collection, coordination, and composing the report.

## Key Opportunities and Challenges

The Government of the State of Eritrea has clearly prioritized with the health sector receiving about 29 percent of the national budget according to the Ministry of Finance. This prioritization supports other governance mechanisms which are centered on implementing existing strategies and plans.

The absence of a formal/statutory multisectoral coordination body for SDGs has been a gap. The existing collaboration between health and other sectors needs to be better grounded in formal coordinating structures even at a high political level. An active and functional multisectoral SDG committee that oversees joint planning and implementation of SDG actions will further strengthen the country's efforts.

The health sector itself will benefit from better co-ordination of partners and programs in ways that ensures that funding is aligned to the national plan and creates efficiencies and effectiveness.

## 2. Human Resources for Health



Dr Martins OVBEDJO giving keynote address during the consensus meeting to strengthen the Research Agenda in Eritrea.

The State of Eritrea has made progress in addressing human resources needs for health despite critical resource constraints. The MoH recognizes that the success of all planned interventions is contingent on availability of the right numbers, effective deployment, and utilization of the healthcare workforce.

The MoH employs majority of the HRH and is responsible for managing and developing human resources for health sector. Most HRH development responsibilities are shared with the National Commission of Higher Education (NCHE), where the Medical School and Asmara College of Health Sciences are domiciled. Long-term development is guided by policies that MoH develops to guide human resources' management and development initiatives.

The MoH's Human Resources Policy and Strategies (June 2003) highlights broad policy statements covering four key practice areas namely: planning, training, continuing education, and staff management, all anchored on principles of relevance, competence, equity, quality of care, gender sensitivity, efficiency, and community involvement. At the present, the HRH department in collaboration with stakeholders is implementing the 2017-2021 HRH strategic plan.

As health service delivery is labour intensive, the Government of the State of Eritrea has been making concerted efforts to improve the stock of healthcare workers for the attainment of health targets. Operational reports show that the healthcare workforce stock has been increasing by 3 – 4 percent annually, reaching a total of 10,208 by the end of 2018, up from 4,464 in 1999.

### Major Achievements

- 1. Registration and Licensing Policy:** The MoH was supported to develop a licensing and certification policy that aims to improve the quality and safety of health services. Furthermore, regulation of health workers will be systematically strengthened, with regular renewal of licenses as well as screening and approval of foreign health workers, as outlined in the policy.
- 2. CPD policy and Guideline:** The continuous professional development (CPD) policy and guideline are complementary to the registration policy. As such, WHO has supported the country to develop these tools in consultation with key stakeholders. Introduction of CPD points will actively promote health workforce growth and capacity, as it is a prerequisite for renewing one's license.

- 3. Assessment of National Health Research System of Eritrea:** The WHO supported MoH to assess the country's research system. The assessment investigated the various elements of research, including the various stakeholders' role and responsibilities, enabling and constraining factors, and actions needed at the country level.
- 4. Health Workforce Assessment Report:** The assessment was conducted based on the health workforce standardized regional questionnaire, looking into health workforce in the country and was disaggregated by cadres over a period of three years. Additionally, the assessment explored the HRH policies, strategies and plans, governance capacity and regulation and supply and demand. Although the assessment was conducted at the end of 2019, the report was finalized, endorsed, and shared in 2020, after the buy in, support and endorsement of all key stakeholders.

### Key Opportunities and Gaps

1. The HRH planning and coordination could greatly benefit from a comprehensive HR needs assessment based on the workload (preferably using workload indicators of staffing needs) and institutionalization of National Health Workforce Account
2. The HRH production still faces challenges in meeting demands of the population. Thus, there is need to explore creation of partnerships within Asmara College of Health Science (ACHS), neighboring and partnering countries, to enhance specialist training in line with the increasing trend of NCDs observed in the country
3. With regards to HRH Management, performance appraisal of health workers needs strengthening. Instituting a comprehensive performance management 'building-blocks' system such as supportive supervision and appraisal mechanisms aimed at incentivizing high performing staff is key.



MOH and WHO Joint-Workplan implementation meeting held in the Ministry of HEALTH. The standing half-yearly meeting is jointly chaired by the State of Eritrea Hon Minister of Health and WHO Country Representative

### 3. Service Delivery

The expansion and quality of health service delivery has been facilitated by the wide scope of health cadres being produced in the country. At the sub-Zoba level, nurses have been trained to improve the quality of care, enhance emergency care and infection prevention and control (IPC). To standardize service delivery across facilities, the country developed medical and surgical emergency guidelines, training manuals (such as for IPC and Field training for EPI) and a laboratory services' supervision mechanism. Following the introduction of the basic health care package in the first HSSDP, there has been a marked increase in access and coverage of health services.

For example, skilled delivery was estimated at 40 percent (Health Management Information Systems report, 2019) compared to 32 percent in 2010 (EPHS 2010) while Immunization coverage rate for Penta-3 and MCV1 stand at 98% in 2019 (HSSDP MTR Report, 2020). The MoH is in the process of developing an Essential Healthcare Package (EHCP), that covers services from preventive to palliative care at the various levels of service delivery.

Health services are a priority of the government. The current sector strategic plan provides for additional services focusing on NCDs risk factors and services for adolescents and elderly persons and expansion of the continuum of care to include sub-specialties, and to scale-up access to services of primary referral services (community hospital) levels. A key finding from the UHC scoping mission field visit is that all hospitals and health centers visited offered NCD services. It was also noted that there was extensive ongoing community awareness and sensitization on NCDs.

#### Major Achievements

**1. Essential Healthcare Package (EHCP):** In December 2019, 52 senior officials were engaged in an internal appraisal of the EHCP in Mendefera. In 2020, as part of the core team, the document was enriched with comments compiled from the internal appraisal. In addition, a list of conditions selected for inclusion were revised according to the updated information and data presented with each age cohort interventions appraised thoroughly. Furthermore, the palliative column was rebuilt with an agreed new format and categorization of the interventions namely physical, psychological, spiritual, and financial. At the time of writing this report, the draft has been shared to staff in specialty hospitals for further consultation before finalizing the document.

- 2. National Infection Prevention Control (IPC) guideline:** The national guideline on IPC was developed and updated to incorporate current information on COVID-19 using the interim WHO guidelines and other tools for reference. Furthermore, training and dissemination of information has been conducted throughout the country on the updated guidelines.
- 3. Provision of technical training on blood regulation:** The training (conducted 7-8 October 2020) aimed to improve country knowledge and capacity on how to strengthen blood bank systems through effective blood regulation. A total of 5 directors and technical officers from the blood bank and regulatory agency undertook the training, gaining valuable experience from other countries and key WHO recommendations that Eritrea opted to explore.

#### Key Opportunities and Gaps

1. There is still substantial room to improve on the scope and quality of services. Although training for hospital managers was conducted in the country (2017), further training for facility and services management will assist to ensure adequate management capacity at all levels
2. A health infrastructure development plan is needed along with development of new infrastructure norms and standards to clarify the gaps that need to be filled to attain UHC

### 4. Pharmaceuticals and Health Products

The main regulatory legal provision in Eritrea is the Proclamation No. 36/1993. Since 2012, the Pharmaceutical Services became the National Medicines and Food Administration (NMFA) which currently constitutes the regulatory body under the Ministry of Health. The WHO benchmarking assessment was conducted for NMFA in 2017.

The overall growth of the regulatory system has been evaluated and rated with the highest score being observed in vigilance, which met the minimum score of 3, whereas the other arms were rated quite low (Maturity level 1), thus indicating the need for improvement. However, since 2017, the country has introduced sound regulation of medicines and medical devices, with guidelines produced for registration. Further, capacity building was conducted on evaluation of dossiers, understanding regulation framework of medical devices, production of procurement and donation guidelines as well as strengthening human and institutional capacity of the quality control laboratory. Additionally, the essential national list of medicines was updated and reviewed.

#### 4.1 Marketing Authorization

The current practice of adoption and adaptation of the regional or WHO guidance and the Common technical document (CTD) is commendable as well as adoption of. More recently, capacity building has been conducted on CTD and registration guideline for medical devices developed.

#### 4.2 Pharmacovigilance

The strengths observed are comprehensive legal provisions for a national pharmacovigilance system that includes Adverse Reactions (ADRs), Adverse Events Following Immunization (AEFI) and Substandard and Falsified (SF), defined structure with clear responsibilities to conduct vigilance activities, established collaborations between all stakeholders in pharmacovigilance, procedures established and implemented to perform pharmacovigilance activities and established good collaboration with international partners in pharmacovigilance.

The Traditional Medicine (TM) Unit falls under the NMFA. Its policy was developed in 2017. In 2019, a TM survey was conducted in Gash Barka and Debub, and a report produced and disseminated to all stakeholders. Furthermore, WHO supported the team to participate in the first WHO Interregional Online Training

Workshop on ensuring the quality of traditional, complementary, and integrative medicine (TCI) products, in October 2020.

#### Major Achievements

- 1. Current Good Manufacturing Practice (cGMP) marathon training:** With the support of WHO, the cGMP training was provided over 12 sessions (from 7 Sep to 30 Nov 2021) for key personnel of the national regulatory agency.
- 2. Procurement of IT tools for regulatory agency expansion:** Based on the recommendations of the WHO benchmarking assessment conducted in 2017, the National Medicines and Food Administration and the MoH is planning to introduce automated registration of medicines and medical products, as well as establish sub-divisions at Zoba level to ensure regular monitoring and vigilance is present. In line to this, WHO supported procurement of 30 computers, 6 printers, and other information technology accessories.
- 3. Updating working documents:** WHO supported the MoH to update the standard operating procedures (SOPs) and tools of working documents, namely: Recall protocol for medical products, Pharmacovigilance data management process, Pharmacovigilance (PV) signal management process and Risk communication plan
- 4. Dissemination of medical devices' registration guideline:** WHO supported the development and printing of the medical devices' registration guideline.
- 5. Quality control laboratory:** a training needs' assessment was supported. The QCL chemical store has been renovated. In addition, there has been support for chemical referencing and procurement of reagents as well as the deployment of personnel.



Above: WHO team on a support supervision mission at the Pharmacy of Massawa Hospital

## Key Opportunities and Gaps

1. The quality control laboratory needs drastic investments and inputs, as checking for quality of samples in country is difficult for all type of medicines. The current efforts and investment towards accreditation of quality control laboratory need to be supported and augmented.
2. Although there are policies in place for the NMFA, there is need to revise proclamation 36 to fully state the authority given to the nation's regulatory agency
3. The magnitude of TM practices in the country needs to be fully investigated and protocols/guiding tools developed on how the MoH is planning to close the gap

## 5. Data and Information

To meet its HSSDP II goals on data and information use, Eritrea prioritized the establishment of electronic data systems. By 2019, Eritrea had installed and rolled out the District Health Information Software (DHIS 2) in all Zobas. In Eritrea, as in many countries in the African Region, routine data collection is still paper based and is collected by health care workers in health facilities and then sent to the Zobas for entry into DHIS 2.

Eritrea uses the offline version of DHIS 2 which is working well with high reporting rates and consistent data sets. The routine health information system remains the only major source of health data in Eritrea. With routine data, Eritrea has been able to assess performance of several facility as well as population-based indicators and produces annual statistics for many such indicators.

The reporting rate in Eritrea is way above the 75 percent threshold set by WHO for good reporting and is one of the highest in the African Region. The quality of routine health facility data in Eritrea is generally good, with very high reporting rates and consistent datasets. As such, almost all facilities in Eritrea (98 percent) submit their routine reports every month, and almost all (98 percent) submit the reports timely.

Population-based surveys that provide comprehensive and representative data on health and population are rare in Eritrea. over the last five years, twelve population-based surveys have been done, with only four of them covering major health dimension and being aligned to international standards. This suggests that Eritrea is unable to obtain adequate and timely data and information on coverage of interventions, prevalence of diseases and mortality.

According to the data quality assessment conducted in 2019, the overall systems' performance at the National Level was at 57 percent. In addition, according to the recently concluded SCORE 2020 (survey, count, optimize, review, enable) assessment, Eritrea has data available for only half (51percent) of the health-related SDG indicators. The SCORE for health data technical package was conducted by WHO to assist Member States in strengthening country health information systems and capacity to monitor and track progress

towards the health-related SDGs, including UHC, and other national and sub-national health priorities and targets.

## Major Achievements

1. **Health observatory:** the NHO establishment is ongoing following the official nomination of the NHO head which was endorsed by the Minister while the revised roadmap was endorsed by the senior management team. The terms of reference for the steering committee have been drafted, and stakeholders mapped. Implementation of the roadmap has started with office space designated, responsible persons assigned to tasks in the roadmap with timeline, and draft annual plan for operationalization of the office produced. WCO supported the team to undertake orientation on the integrated African Health Observatory (iAHO) and the revised roadmap reflected the plan for joining iAHO instead of establishing a stand-alone national observatory. Office furniture and stationaries have been procured by WCO and provided for the NHO office establishment
2. **ICD-11 and CRVS capacity building:** 15 persons from the MoH and National Statistics office were supported by WHO to participate in the training on ICD-11, verbal autopsy and cause of death certification with active participation and hands-on exercise on coding the cause of death using ICD-11. As a follow up focal persons of CRVS and ICD-11 have been participating on the discussion and supporting platforms as well as road map development for implementation of the activities.
3. **DHIS-2 capacity building:** The national server for DHIS2 as well as updated version of the software has been installed and server upgraded. The technical expertise from health information system program (HISP) Tanzania with support of Oslo university and GAVI, with coordination from WCO and UNICEF implemented the activity. Within the same period of November 20 national DHIS2 focal persons have been trained on DHIS-2 with provision of certificate.

## Key Opportunities and Gaps

1. There is need to introduce and rollout the civil registration and vital statistics system for collecting data on births and deaths. For community-level reporting of deaths, systems such as verbal autopsy should be given consideration.
2. Population-based surveys should be carried out more frequently to increase the reliability of planning data for decision making
3. Accelerate implementation of the Eritrea national health observatory to facilitate the centralization and dissemination of health data and information and products

## 6. Communicable Diseases

### 6.1 HIV/AIDS



Left: Participants gather during the commemoration of the World AIDS Day 2021. The meeting was held in compliance with COVID-19 protocols

The multi-sectoral response of HIV has been successful in reducing HIV related infections and deaths. Between 2005 and 2019, HIV prevalence was nearly halved, dropping from 1.1 percent to 0.6 percent, with incidence declining from 0.43 percent per 1000 people to 0.11 percent. According to estimates by Spectrum, HIV related mortality declined from 1,400 deaths in 2005 to 310 in 2019 or 9 out of every 100,000 people.

Among key and priority populations, the pattern on VCT attendance among expectant mothers has registered a decline in positivity from 2.5 percent to 0.21 percent, while among other VCT clients, HIV prevalence declined from 4.34 percent to 0.37 percent between 2003 to 2019. This momentum has been maintained between 2017 and 2020. According to the Spectrum 2020 estimation, the status of the UNAIDS 90:90:90 Fast-Track targets progress in Eritrea was at 86 percent, 73 percent and 85 percent respectively by the end of December 2019. The second 90 improved from 65.5 percent in 2018 to 73 percent in 2019.

A study among female sex workers (FSWs) in 2019 showed that the 90:90:90 targets reached 91,100 and 95 percent respectively. This indicates that the confi-

dence of the program to fast track the targets and the basis for the upward revision of the targets to 95-95-95 in the Eritrea's National Strategic plan 2021-2026. Since the effort to achieve the UNAIDS 90-90-90 targets is dependent on HIV counselling and testing (HCT), HIV testing services have been expanded from 239 in 2012 to 267 in 2019 with almost 80 percent of the facilities providing testing services across the country.

According the 2019 LQAS survey result, the proportion of men aged 15-54 years who have ever been tested for HIV increased from 55 percent in 2013 to 77 percent in 2019, while in women aged 15-49 years, the proportion increased from 62 percent to 84 percent. According the IBBS in 2019, among female sex workers, HIV testing is almost universal with 97.5 percent having accessed HIV testing. Scaling up the prevention of mother-to-child transmission (PMTCT) service was another area that received great focus in the national strategic response as the service is fully integrated. Sexual and reproductive health data is collected and reported through the routine HMIS system. The LQAS 2019 result showed that 98 percent of mothers of infants aged between 0 -11 months

attended ANC in the 252 ANC sites while 96 percent took and received HIV test results during their last pregnancy. The HIV positivity rate in those tested for PMTCT services was 0.21 percent in 2019.

Since the introduction of free provision of ART, the number of sites offering ART and refill has increased from 21 in 2013 to 53 in 2020 as shown in figure 1 below leading to improved access and reduced loss to follow up and late starts. In 2016, the [WHO "Treat All" guidelines](#) was adopted while routine viral load monitoring was introduced in 2017. The 2016 guideline contains key recommendations to "treat all" people living with HIV, including children, adolescents, adults, pregnant and breastfeeding women, and people with coinfections.

They also include new service delivery recommendations on how to expand coverage of HIV treatment to reach all people living with HIV. The recommendations aim to improve the quality of HIV treatment and to bring the world closer to the universal health coverage



WHO Representative for Eritrea, Dr Martins Ovberedjo and Mr Tewelde Yohannes, Director of Planning and Policy at MOH checking a VTC attendance register at a health facility in Eritrea.

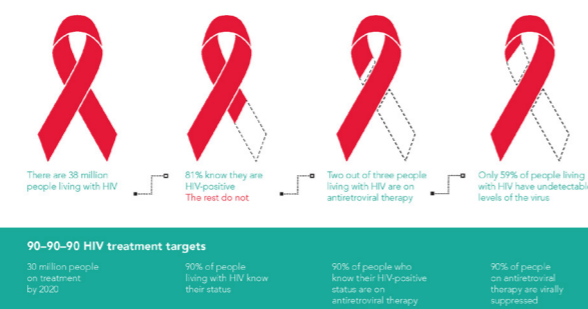
ideals of integrated services, community-centred and community-led health care approaches, and shared responsibility for effective programme delivery. The use of GeneXpert platforms, viral load testing and early infant diagnosis (EID) has been decentralized and is now available in Zoba hospital laboratories. The National Health Laboratory (NHL) supports VL testing and EID in the referral hospitals and monitors quality assurance.

## Major Achievements

In 2020 - 2021, the WCO support focused on:

- HIV drug resistance monitoring:** With WHO technical support, the national HIV DR monitoring and prevention strategy was set in 2014. Further, in 2018, HIV DR study was conducted, and the report finalized with support of WHO HQ and is in process for publication. The study result showed that the

### 90-90-90: Treatment for all



### UNAIDS 90.90.90 targets

overall prevalence of pre-treatment HIVDR (PDR) resistance to non-nucleoside reverse transcriptase inhibitors (NNRTI) was 7.1 percent, with no significant difference observed by gender. Further, it was noted that resistance to NRTI or PI was not observed among ART initiators while the prevalence of PDR to NNRTI was significantly higher among ART initiators with prior exposure to ARV (42.4 per-



The MoH and WHO HIV Team during the collection of Data for the HIV DR survey in Tessene Hospital, Gash Barka

cent) compared to the ART initiators without prior ARV exposure (3.9 percent). The prevalence of PDR to NNRTI was significantly higher among male ART initiators without prior ARV exposure (9.3 percent) compared to female ART initiators without prior ARV exposure (0.9 percent).

- HIV End Term Program Review:** Resources

### ART AND ART Refill Sites in Eritrea, 2020

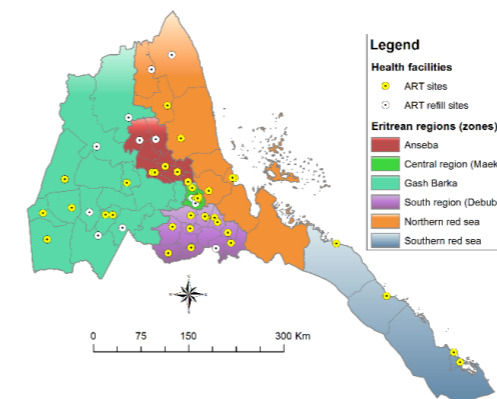


Figure 4: Distribution of ART and Refill Sites, 2020

mobilized from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GF) was transferred to WHO through an MoU. The WHO provided technical support from all levels of the organization. Through this support, the HIV end term review of the 2017-2021 strategic plan was conducted, and a report produced. Recommendations were issued while evidence was provided for the new 2021-2026 strategic plan development and Global fund funding proposal development.

- HIV/STIs Strategic Plan:** The WHO staff provided technical support at all levels to conduct the end term program review of the existing strategic plan 2017-2021. This is to provide evidence for the development of the 2021-2026 HIV strategic plan for implementation of the integrated high impact interventions including elimination of HIV and syphilis.
- Global Fund funding requests for HIV:** the WHO CO supported and facilitated the development and submission of the 2021-2023 Global Fund funding requests for HIV, TB and Malaria which was successful, and fund was received for implementation.
- Commemoration of the World AIDS Day (WAD) 2021:** the WHO with other UN agencies supported the commemoration of World AIDS Day (WAD) 2021 with the theme "Step up, be bold, end AIDS, end inequalities and end pandemics".
- 2021 WHO Global HIV Report:** the WHO supported the MoH in collection, compilation, validation, and submission of HIV data on the WHO online website of HIV to monitor the health trends which also informed the WHO HIV global report of 2020/21.

## Way Forward

There is need to provide technical and financial support to the MoH to:

1. Reach the 90.90.90 UNAIDS targets by updating the HIV testing strategy in line with the updated WHO 2019 testing Strategy.
2. Provide technical and financial support to the MoH to initiate HIV self-testing (HIVST) and scale up HIV pre-exposure prophylaxis (PrEP) implementation
3. Scale up, as a matter of public health priority, the elimination of mother to child HIV and syphilis (eMTCT) transmission.

4. Provide technical and financial support to conduct the regular evaluation of laboratory in Eritrea using WHO standard checklist and questionnaire to collect information and conduct HIV DR survey

## Challenges

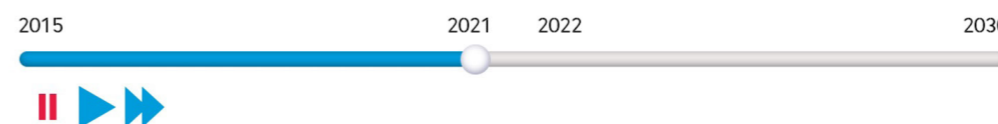
Although updated strategic plan and guidelines are in place there is a need of regular monitoring through supportive supervisions

## 6.2 Tuberculosis



THE CLOCK IS TICKING

**WORLD  
TB DAY  
2021**



Eritrea has made significant progress in reducing TB incidences and TB related deaths, with the estimated TB incidence having reduced from 108/100,000 in 2016 to 89/100,000 in 2018 while death reduced from 19 to 16/100,000 in the same period. The proportion of bacteriologically confirmed cases among new pulmonary patients has increased from 54.8 percent in 2016 to 68 percent in 2019, which is attributable to the increased access to GeneXpert. The proportion of childhood TB cases diagnosed has consistently remained high at an average of 15 percent of all notified patients.

However, TB notifications, as observed in all the six regions of the country, has been declining in the past 13 years at an average rate of 6.1 percent per year. In 2018, the Northern Red Sea region had the highest TB notification rate at 58.3/100,000 people while Debub region had the lowest rate at 27.8/100,000 people. Similarly, during 2014 -2018, the fastest (-21.4 percent) decline in TB notification was observed in the Southern Red Sea region whereas the lowest decline (- 6 percent) in notification was noted in the Northern Red Sea region.

Prisoners, identified as key populations, are screened for TB routinely and reports submitted regularly to the National TB Control Program (NTP). The NTP provides all the TB diagnostics including reagents and anti TB

medicine for the prisoners. In 2019, 10.34 percent of all presumptive cases screened for TB and 3 percent of all TB patients treated in the country were from the prisons. Another high-risk group regularly screened for TB is for people suffering from diabetes. Similarly, TB patients are tested for diabetes.

The expansion of the lab services has been instrumental in TB diagnosis in Eritrea. The network has been markedly improved with the provision of 79 microscopy [24 LED] sites and 29 GeneXpert (GXP) (110 modules) by the end of 2019, up from 9 in 2015 and 14 functional at the end of 2017. Currently, 90 modules are functional. All the regions (Zobas) have a GeneXpert machine though the distribution and access are not even in addition to inadequate availability of a reliable transport system for sample referral to the GeneXpert sites. In 2019, 70 percent of presumptive TB patients had GeneXpert as the initial diagnostic test.

Despite the availability of the machines, they are not connected to the GXAlert due to poor internet connectivity in the country. The National TB Reference Laboratory is now doing first and second-line Drug Susceptibility Testing (DST) using Line Probe Assay (LPA) (molecular) and mycobacteria growth indicator tube test (MGIT) (phenotypic). The 8-laboratory staff were trained and are performing the tests. The current, sample transport system relies on either

the health workers, ambulances, motorcycle or public transport. The Uganda supranational reference lab (SRL) has facilitated the development of a Transportation of Sputum Referral System manual and quality sample transport mechanism to improve the current sample transportation system in Eritrea.

In Eritrea, all diagnosed TB cases are enrolled to TB treatment. The majority, (72 percent) of treatments are supervised by health workers while the remaining 28 percent is supervised by DOTs (Directly, Observed, Treatment, short course) promoters, which has contributed to the high treatment success. The proportion of under 5-year-old contacts eligible for isoniazid preventive therapy (IPT) enrolled on treatment has progressively increased from 38.8 percent in 2015 to 44 percent in 2019.

Eritrea has made significant progress in the implementation of TB/HIV collaborative activities over the years with high uptake of TB/HIV services. The proportion of TB patients with documented HIV status increased from 59 percent in 2012 to 100 percent in 2015 and has remained at this high level to date as shown in figure 8 below. There was also an improvement in antiretroviral therapy (ART) and cotrimoxazole prophylactic treatment (CPT) initiation from 92.9 percent and 87 percent in 2015 to 97 percent and 94 percent in 2019 respectively.

Treatment success for drug susceptible TB has progressively improved from 84 percent for the 2011 cohort to 93 percent for the 2018 cohort as shown in figure 9 below. Among the regions, only Gash Barka region has a treatment success below the 90 percent target i.e. 89 percent in cohort 2018. Furthermore, the adverse treatment outcomes for TB patients reduced, with death rates dropping from 5.8 percent in 2013 to 3.2 percent in 2018 while lost to follow-up dropped from 2.6 percent to 1 percent in the same period.

Both treatment failure and cases not evaluated decreased from 2 percent in 2014 to 1 percent over the same period. Appropriate treatment provision with no experience of drug stock out and continuous monitoring of patients with the involvement of community DOTs promoters has contributed to the successful TB treatment in the country. A drug resistance survey was conducted in 2017/2018 and showed a prevalence of Rifampicin resistance (RR)

for multidrug-resistant (MDR)-TB (RR/MDR-TB) of 2.0 percent (1.0 - 3.6) among new and 7.5 percent (2.1 - 18.2) among previously treated TB patients, which is lower than previous WHO estimates of 2.6 percent and 18 percent respectively in 2016. No Pre/ extensively drug-resistant tuberculosis (XDR)-TB was found. The DST coverage in all bacteriologically confirmed cases increased from 7 percent in 2014 to 39 percent in 2018 and 70 percent in 2019.

The number of RR/MDR-TB cases diagnosed has remained low, standing at 17 in 2019 compared to the estimated 66 when the DST coverage was highest. Treatment success rate for the 2017 cohort reached 91.6 percent as compared to 67 percent in 2016. The establishment of the true burden of TB has remained a challenge as neither a TB prevalence survey nor a population census has been done, hence these are estimates which keep changing, thus making measuring of coverage and achievements a challenge.

In 2018, the incidence of RR/MDR-TB was estimated to be 66 cases but only 16 cases were diagnosed and treated the same year. The number diagnosed in 2019 was 17 indicating a 76 percent treatment coverage gap. This is despite 70 percent of all bacteriologically confirmed patients having been diagnosed using the GeneXpert. In the 2021-2023 grant, the aim is to have 100 percent of bacteriologically confirmed tested by GeneXpert in addition to measures to increase TB case finding. The HIV prevalence among the general population has remained below 1 percent over the period while the prevalence of HIV among TB patients was 3.9 percent among the regions with Maekel region recording the highest prevalence of HIV (10.6 percent) among TB patients while the Southern Red Sea region recorded zero percent of HIV cases among TB patients in 2019.

## Major Achievements

In 2020, the WCO support focused on:

1. **TB drug resistance monitoring:** With WHO technical support, the National TB DR monitoring and prevention strategy was set in 2014. Further, in 2018, an TB DR study was conducted, and the report finalized with support of WHO HQ and is in process for publication. The study result showed that the prevalence of multidrug-resistant (MDR)

TB was 1.0 percent and 3.8 percent among new and previously treated cases, respectively, as was the prevalence of rifampicin resistance (RR) without isoniazid resistance. All RR cases had a phylogenetic marker causing capreomycin resistance, confirming the presence of a predominant resistant TB sub-lineage in the Horn of Africa region. However, extensively drug-resistant (XDR) TB was not detected.

2. **TB End Term Program Review:** Resources mobilized from Global Fund to Fight AIDS, Tuberculosis and Malaria (GF) was transferred to WHO through an MoU. The WHO provided technical support from all levels of the organization. Through this support, the HIV end term review of the 2017-2021 strategic plan was conducted and a report with key recommendations produced. Evidence for the new 2021-2026 strategic plan development and Global fund funding proposal development.
3. **TB Strategic Plan Development:** the WHO, through its staff, provided technical support at all levels to conduct the end term program review of the existing strategic plan 2017-2021. This is to provide evidence generation for the development of 2021-2026 TB strategic plan for implementation of the integrated high impact interventions including ending TB.
4. **2020 WHO Global TB Report:** the WHO supported the MoH in the TB data collection, compilation, validation and submitting it on the online website of TB to monitor the health trends. Additionally, this contributed for the WHO TB Global report of 2020/21.

## Challenges

1. Limited capacity of human resources especially in conducting studies.
2. Supportive supervisions were limited due to COVID-19 lock down.

## Way Forward

There is need to provide technical/financial support to MoH:

1. Facilitate the e-training on TB strategic information and social mobilization.
2. Strengthen the National Health Laboratory (NHL) and Supranational Reference laboratory (SRL) linkage.
3. Update the Tuberculosis (TB) preventive treatment (TPT) guideline in line to the updated 2020 WHO guideline.
4. Scale up the implementation of end TB strategy.
5. Conduct the MDR-TB survey.



## 7. Malaria

Between 1998 and 2019, Eritrea has made significant progress in controlling malaria, reducing the incidence rate from 157 to 25.6 cases per 1000 people per year. Malaria-specific deaths have decreased exponentially in all ages, recording a 99 percent decrease from 404 deaths in 1998 to 3 deaths in 2019. Despite recently reported upsurges in malaria cases in some sub-zobas, Eritrea is steadily progressing towards malaria pre-elimination.

The parasite species distribution did not show significant change in the past 3 – 5 years. Still, *Plasmodium falciparum* is the predominant malaria parasites accounting for 70 percent of all malaria infections followed by *P. vivax* at 28 percent, while *P. malariae* and mixed infections constitute 2 percent of infections. According to a 2003 Malaria study, the *Anopheles Arabiensis* remains as the predominant and primary vector, recording at 96 percent. Gains in malaria control are mainly due to scale up of curative and preventive malaria interventions.

Over the years, the program managed to maintain high levels treated net ownership, with the percentage of households owning at least one net standing 95 percent and 85 percent in 2017 and 2019, respectively. The de facto population with access to long-lasting insecticidal nets (LLIN) decreased from 82 percent in 2017 to 53 percent in 2019 while the general population who slept under LLIN decreased from 64 percent in 2017 to 49 percent in 2019. The percentage of those who slept under LLIN among the de facto population with access to LLIN was 66.9 in 2017 and 67.3 in 2019.

The 2017 Malaria Indicator Survey (MIS) was conducted immediately after the last mass campaign of LLINs and thus the decline in ownership of LLINs in 2019 may be explained by the wear and tear and/or loss that happened after 2 years of the campaign. Overall, 63 percent of the existing LLINs were used the night before and this was comparable for the surveys done in 2017 and 2019. According to the MIS 2017 and 2019 surveys, the national indoor residual spraying (IRS) coverage improved from 17 percent in 2017 to 31 percent in 2019. The current stratification shows malaria is highly heterogeneous, ranging from

incidence of 3.0 to 142.0 cases per 1000-people per year. 41 of the total 58 sub-Zobas of the country (70 percent) are malaria endemic localities with Gash Barka, Debub and Semenawi Keih Bahri Zobas bearing over 90 percent of the national burden. Gash Barka has the highest malaria burden in Eritrea, recording around 55,000 cases (80 percent) of the total 68,756 cases reported in 2019. This translates to per- cent incidence of 58: range 13.4–142.0 cases per 1000 people per year. Only 11percent of the all malaria cases were under-five children and nearly 1 percent of malaria infections occurred in pregnant women.

In 2019, there were 22 sub-Zobas with incident levels below 5 per 1000 people per year, with Anseba, Maekel, and Debubawi Keih Bahri Zobas (central highlands and eastern lowlands), meeting requirements for pre-elimination. Moving forward, Eritrea will develop a refined sub-national stratification map based on epidemiological data triangulated with appropriate metrics namely entomological, ecological/ demography and interventions coverage data to better disaggregate malaria situation and inform targeting of interventions. Stratification will be done at village and/or foci level in very low and focalized transmission settings implementing elimination activities.

### 2020 Major Achievements

The WCO support focused on:

- Antimalarial Drug Resistance Monitoring:** Therapeutic efficacy and safety study of Artemisinin and Amodiaquine: The result showed that quality assurance of malaria diagnosis and treatment is a focus, thus a need to conduct therapeutic efficacy studies (TES) and monitor the prevalence of Histidine-rich protein II (HRP-II) deletion in *P. falciparum* parasites from infected patients, as stipulated in WHO guidance. Quality assurance of malaria diagnosis and treatment is a focus, thus a need to conduct therapeutic efficacy studies (TES) and monitor the prevalence of Histidine-rich protein II (HRP-II) deletion in *P. falciparum* parasites from infected patients, as stipulated in WHO guidance.

- Malaria End Term Program Review:** Malaria End Term Program Review: The WHO provided technical support for the conduct of the end term review. A report has been generated to provide evidence both for the new strategic plan and GF funding request.
- Malaria Strategic Plan:** provided technical support through WHO staff at all levels in conducting the end term program review of the existing strategic plan 2017-2021. This is to provide evidence generation for the development of 2021-2026 Malaria Strategic Plan for implementation of the integrated high impact interventions including its elimination.
- Global Fund funding requests for Malaria:** Supported and facilitated in the development and submission of Global Fund funding requests for TB and grant confirmation received for implementation.
- WHO 2020 Global Malaria Report:** Supported MoH in the Malaria data collection, compilation, validation and submitting it on the online website of Malaria to monitor the health trends and for the World Malaria Report of 2020/21.

## Challenges

- The National Malaria Control Program still faces challenges in Human resources both in number and capacity especially as the country is going for malaria elimination. Thus, the need to have an expert as long term
- The NMCP is greatly limited in monitoring the program interventions as the supportive supervisions are being conducted irregularly.

## Way Forward

Provide technical/financial support to MOH to the HRH planning and coordination could greatly benefit from a comprehensive HR needs assessment based on the workload (preferably using workload indicators of staff- ing needs) and institutionalization of National Health Workforce Account to

- Facilitate malaria elimination feasibility assessment
- Conduct Therapeutic efficacy and safety of antimalaria drugs
- Conduct Insecticide Resistance Study
- Conduct accreditation of malaria microscopists
- Build capacity in Malaria Case Based Surveillance and SMS

Below: Table 1: List of Sub-Zobas eligible to conduct malaria elimination in Eritrea in 2020

Zoba	Sub-Zoba	Zoba	Sub-Zoba
Anseba	Adi-Tekelezan	Semenawi keih Bahri (North Red Sea)	Adobha
	Elabered		Dahlak (Island)
	Habero		Karora
	Keren	Debubawi Keih Bahri (Southern Red Sea)	Areta
Berikh	Assab		
Ghala Nefhi	De-Denkalia		
Maekel	North East Asmara	Debub	Makelay Keyhi Bahri
	North West Asmara		Adi Keih
	Serejeka		Dbarwa
	South East Asmara		Segheneyti
			Senafe

## 8.0 Sexual Reproductive Health for Maternal and Newborn Children, Adolescent Health and Healthy Ageing

Maternal and child health is one of the priority programs that is defined in the National Health Policy and Health Sector Strategic Plan and is described in the Essential Healthcare Package. The maternal health situation remains poor leading to weak health outcomes for both mother and child. The adjusted maternal mortality rate remains exceptionally high with 486 maternal deaths per 100,000 live births, a burden which is disproportionately clustered among the poor. Nationally, over the last 5 years facility based maternal mortality ratio is not showing reduction, though in 2017 there was some reduction. The Neonatal Mortality in Eritrea is stagnating. According to the data reported by Health Management Information System (HMIS) from Health facilities, there were 145 neonatal deaths during delivery in 2019 which was 43 percent greater compared to the 2018 neonatal deaths.



### 8.1 Antenatal Care Services

Since 2018, antenatal care services (ANC) were provided in 252 of the 338 health facilities accounting for 75 percent of the health facilities. 76 percent of the ANC services are provided in health stations. During this continuum of care, the services provided include HIV counselling, testing and in case of a positive test result, initiation into the ART program.

Other tests include syphilis where treatment is initiated for positive results. In addition, expectant mothers receive Iron & Folic Acid; hemoglobin (Hgb) determination during the 1st and 4th visits. For male partners, they are tested for HIV and if positive, are initiated into the ART program. Male partners in sero-discordant couples receive pre-exposure prophylaxis services. Some key ANC performance indicators over the last 5 years shows increasing or sustaining trend as shown in figure 14.

ANC service coverage has been increasing especially during the first trimester through out the zobas with Gash Barka recording the highest coverage of 83.6 percent. The fourth visit is still low at 40 percent while the drop out rate was recorded at 60 percent.

### 8.2 Prevention of Mother-to-Child Transmission (PMTCT)

The PMTCT testing rate is also showing significant improvement. In 2018, across all Zobas, the results posted, 95 percent, were above the target value (percent while the overall PMTCT HIV positivity trend posted a decreasing rate starting 2019. This low prevalence is one criterion fulfilled for Eritrea to proceed to HIV elimination. The provision of intervention delivered to expectant mothers includes a syphilis test. It was noted that the positivity rate was at 1.5 percent in 2018 and 0.015 percent in 2019. The highest positivity rate was posted at the Gash Barka Zoba that accounted for 4.7 percent and 4 percent in 2018 and 2019 respectively.

### Maternity Waiting Homes

To reduce maternal and neonatal death during delivery and to improve skilled birth attendance in the country, the MoH has invested in a total of 43 maternity waiting homes in the hard to reach areas in Zobas outside of Zoba Maekel. MoH reports indicate an increase in skilled birth attendance between 2017 and

2019. According to the 2019 DHIS report, total deliveries in health facility were 41,974, 47,648 and 50,290 in 2017, 2018 and 2019 respectively.

Likewise, deliveries attached to maternity waiting homes have shown slight increases over the years standing at 7,699, 8,670 and 9,173 deliveries in 2017, 2018 and 2019 respectively. The disaggregation of the deliveries by skilled attendants indicates that about 48.9 percent of all deliveries were carried out by the lower level health facilities which include health center, health station and MCH clinic, all of which need strengthening through the provision of necessary equipment and human resources for better performance.



#### Key Roles of Maternity Waiting Homes

1. Avoids heavily pregnant women having to travel long distances
2. Safe and comfortable place for pregnant women to stay before delivery
3. Allows women to network and learn how to care for themselves and the baby
4. Access to well-equipped, quality health facility
5. Newborn care
6. Improved pregnancy and birth outcomes

Thus, the maternity waiting homes are contributing to the increase of skilled care attendance in the Zobas with hard to reach areas. The Southern and Northern Red Sea Zobas have contributed higher rates of skilled care delivery as they have many hard to reach areas.

### Caesarean Section Rates

Between 2018 and 2019, C/S rates increased slightly from 6.1 percent to 6.5 percent. More than 40 percent of the total caesarean section are done in the National Referral Hospitals as they are well equipped. The table 2 below shows the number and percentage of C/S conducted in each Zoba.

### 2021 Major Achievements

1. **Implementation of integrated service delivery strategies:** the WHO supported the MoH to implement integrated service delivery strategies and evidence-based interventions for Maternal, Newborn and Child Health by:
  - Developing the neonatal care standards including kangaroo mother care (KMC)
  - Adapting the 2019 updated WHO Integrated Management of Childhood Illness (IMNCI) guideline. The guidelines are currently being printed for dissemination and implementation.
  - Building capacity of health workers on life saving skills. Six medical doctors from remote areas of the country were trained for 12 weeks on comprehensive emergency obstetrics and neonatal care (c-EmONC).
2. **Maternity Waiting Homes:** The WHO supplied essential equipment and supplies to support the full functionality of the Maternity Waiting Homes in remote areas.
  - The equipment included solar equipment and appliances with 20 fetal dopplers, 40 rechargeable head-lamps with micro USB cable, 20 multi-tip phones chargers and 20 solar panels to the rural health facilities in need of reliable, simple, accessible, and affordable electricity. The essential supplies included 650 maternal pajamas, 650 baby cover and kits and 400 bed.

Table 2: Number and percentage of cesarian section conducted by Zoba (2018-2019)

Zoba	2018				2019			
	Skilled Birth attendants	Abnormal Deliveries	Caesarean section	Percent of caesarean	SBA	Abnormal Deliveries	Caesarean section	Percent of caesarean
AN	8248	638	384	4.7	8437	646	389	4.6
DE	9938	844	559	5.6	10290	993	682	6.6
DKB	982	55	29	3.0	1162	94	58	5.0
GB	10444	700	350	3.4	11800	840	516	4.4
MA	4657	96	37	0.8	4921	193	136	2.8
NR	8057	1633	1466	18.2	7833	1657	1422	18.2
SKB	5660	293	123	2.2	6147	238	104	1.7
National	47986	4259	2948	6.1	50590	4661	3307	6.5

- Finalization of the Maternal and Perinatal Death Surveillance and Response (MPDSR) strategy:** the WHO supported the finalization of the MPDSR strategic guideline and is on the printing process for implementation through capacity building and monitoring of the implementation to improve the quality of primary health care of maternal and perinatal health. This, it is hoped, will eventually reduce maternal and newborn mortality and morbidity.
- Cervical Cancer Prevention, Control and Management guideline:** the WHO supported the MoH in the development of the Cervical Cancer Prevention, Control and Management guideline. The document is in the printing process for implementation and capacity building of health workers. Additional 20 cryotherapy machines and 20 gas cylinders are procured for scale up the intervention to all regional hospitals.
- Healthy & Active Ageing (HAA):** the WHO supported the MoH to finalize the Healthy and Active Ageing Framework (HAA) and the Integrated Care of the Older People (ICOPE) guideline. The documents are currently being printed for implementation and capacity building of health workers and stakeholders for the HAA interventions.
- Reproductive, Maternal, Newborn, Child, and Adolescent health (RMNCAH) strategic plan (RMNCAH):** developed the new 2022-2026 reproductive, maternal, newborn, child, and adolescent health (RMNCAH) strategic plan after conducting a comprehensive end term review of the previous strategic plan.
- Comprehensive Emergency Obstetric and Neonatal Care (c-EmONC):** empowered twelve Junior medical doctors from the remote hospitals of the country to decide and perform caesarian section and resuscitate newborns.
- Neonatal Intensive Care Unit (NICU):** One of the strategies to improve the provision of quality health services especially in reducing maternal and child mortality is to set up a new and to strengthen the existing Neonatal Intensive Care Units in Zonal Hospitals. Out of the total 22 Hospitals in the country, only 09 Hospitals have NICUs where even some are not fully equipped. Thus, WHO supported the procurement of the essential equipment and supplies to expand the Neonatal Intensive Care Unit in eight Hospitals and strengthened the NICUs that were partially equipped.

## Challenges

- The Family and community health services still faces challenges in human resources especially in capacity especially during the scale up of interventions to reduce MMR and Neonatal deaths.
- Although updated strategic plan, guidelines are in place there is a need of regular monitoring of the interventions implemented to strengthen the gaps through regular supportive supervisions.

## Way Forward

- There is need to provide technical and financial support to the MoH to reach the 90.90.90 UNAIDS targets by updating the HIV testing strategy in line with the Updated WHO 2019 Testing Strategy to test more people, initiate HIV self-testing (HIVST) and scale up HIV pre-exposure prophylaxis (PrEP) implementation and work on a long term basis for the elimination of mother-to-child HIV and syphilis (eMTCT) transmission.
- There is need to provide technical and financial support to conduct the evaluation of laboratories in Eritrea using WHO standard checklist and questionnaire to collect information and conduct HIV DR survey to enhance regular monitoring of HIV drug resistance

- There is need to provide technical and financial support to MoH to:
  - Cost the new 2022-2026 reproductive, maternal, newborn, child, and adolescent health (RMNCAH) strategic plan
  - Mobilize resources and implement this new costed 2022-2026 RMNCAH strategic plan
  - Conduct quality of care, integrated with Harmonized Health Facility Assessment (HHFA)
  - Equip the maternity waiting homes for full functionality.
  - Strengthening capacity of health workers on life saving skills (LSS), c-EmONC, neonatal care, cervical cancer management and management of elderly people

## Pictorials



A doctor undertaking Ultrasound examination at Hazhaz Hospital



Fathers at a health facility with their children for antenatal care services (ANC)



A mother and newborn baby in a health facility



The Honorable Minister of Health of State of Eritrea Mrs Amina Nurhusein administering routine vaccination to a baby in one of the health facilities in Eritrea.



WHO and UN Representatives at the dissemination of Preliminary Report of Eritrea Reproductive, Maternal, Neonatal, Child, Adolescent and Healthy ageing workshop



Dr Martins OVBEDJO on a supportive supervision mission to strengthen maternal health services in Keren, Eritrea

## 9.0 Neglected Tropical Diseases (NTDs)



A clinical officer conducting eye examination at one of the health facility as part of routine glaucoma and cataract screening for over 60s

Data available in the WHO NTDs portal helps to monitor global and country progress towards achieving the targets for control and elimination, as defined by the new WHO Road Map 2021-2030. Climate change affects social and environmental determinants of health including clean air, clean and safe drinking water, food security and shelter. The indirect effect of climate change is climate mediated change seen in the incidence of infectious diseases and deaths.

Climate change alters several environmental conditions that cause morbidity and mortality. For instance, changes in temperature, amounts of rainfall and humidity may cause a proliferation of the malaria-carrying mosquitoes at higher altitudes, thus resulting in an increase in malaria transmission. In dry areas, heavy rainfall can provide good breeding conditions for the mosquitoes thus leading to the increase in malaria cases. Some diseases related to climate change and water are Malaria, malnutrition, Diarrhea, Schistosomiasis, Leishmaniasis, Dengue fever and Chikungunya. The burden of these diseases in endemic countries is high and despite the availability of safe and cost-ef-

fective interventions for their prevention and control, the resource allocated for NTDs is still inadequate. In Eritrea, the known NTDs are Schistosomiasis, Intestinal Helminthiasis, Trachoma, Lymphatic Filariasis, Leprosy, Dengue Fever and Leishmaniasis. Exceptionally Eritrea was certified free of Guinea worm disease in 2011. The Neglected Tropical Diseases Program (NTDP) focuses on an integrated control of the endemic 7 out of the 13 diseases that WHO has classified as common NTDs.

### 9.1 Schistosomiasis

According to the Sentinel Site Surveillance report of Schistosomiasis and STH in Eritrea Dec. 2019 the overall prevalence of Schistosoma mansoni infection in this survey was 2.82 percent. S. mansoni was found in five out of the six zobas of Eritrea (all except Debubawii Keih Bahrizoba). The highest infection rate (8.68 percent) was found in Debub zoba. The prevalence in the remaining four zobas, Semenawi Keih Bahri, Anseba, Maekel and Gash Barka was 1.20, 1.18, 0.66 and 0.38 percent, respectively. Out of the total 58 sub zobas in

the country, schistosomiasis found only in 28 sub zobas. In the sub zobas with *S. mansoni* infection, prevalence ranged from 0.17 percent in Goluj to 15.35 percent in Dekem-hare sub-zoba. The vulnerability and spread of Schistosomiasis in Eritrea indicates that the disease is prevalent in Anseba, Dehub and Makel. The Ministry of Health has been giving mass drug administration (MDA) tablets to school going children whilst creating awareness on the disease in schools.

The MoH has also been introducing environmental sanitation to control the population of snails in water bodies. Water shortage and droughts from climate change could increase demand for irrigation particularly in arid regions, a situation that is likely to increase snail populations resulting in higher risks of infection with Schistosomiasis parasite.

### Situation Analysis

Out of the total 58 sub Zobas in the country, schistosomiasis was found only in 28 sub zobas.

### Implimented Activities in 2020

1. A mass drug administration (MDA) for SCH was conducted in Mendefera sub zone where 96.5 percent (46,625) people received praziquantel tablets.
2. An MDA for Lymphatic Filariasis (L.F) was conducted in Forto-Sawa sub zone where 87.0 percent (35,340) people received Diethylcarbamazine (DEC) and Albendazole tablets.

Multiple integrated interventions through multisectoral approach to the control of NTDs with increased access of effective preventive chemotherapy (MDA), effective vector control, provision of safe drinking water and sanitation and consistent health messages and information plus drugs treatment to the infected individuals are of priority interventions. There was no major adverse effect following the MDA, however some minor symptoms were reported including 4 cases of vomiting, 2 cases of abdominal pain, 1 case for nausea, 1 head ache case and 1 fatigue case).

### Activities not Implimented

1. An MDA to three sub zones with moderate prevalence of SCH
2. An MDA to three sub zones for school age children with low prevalence of SCH
3. An MDA for L.F to one sub zone.
4. Capacity building for Health workers (HWs), Community Health Workers (CHWs), and school teachers on drug distribution and signs of side effects.
5. Impact assessment for SCH and STH
6. Capacity building (ToT) HWS, Lab technicians in six subzones on selective NTDs.
7. Conduct sentinel site survey in 28 schools, conformatory mapping in endemic sub zones of L.F and Molluscicide application for breeding sites of snails.

### Challenges

1. Due to the COVID-19 lock down measures, MDA activities were not exercised.

### Recommendation

To meet the target of annual plan proposed for the year, there is a need to accelerate resource mobilization efforts to support program efforts

Table 3. Mass drug administration of SCH & L.F

	Sub Zone	Target Population	Coverage		2- 4 years		5-14 years		15 and above	
			No.	Percent	M	F	M	F	M	F
1	Mendefera	48,2834	46,615	96.5	0	0	9,620	9,723	12,822	14,450
2	Forto-Sawa	40562	35,340	87.0	2,314	2,299	4,946	5,021	10,849	9,911



## 10.0 COVID -19

Eritrea recorded its first confirmed COVID-19 case on 21st March 2020. The index case was an Eritrean national returning from Norway. By the end of March, the country had recorded 15 confirmed cases. Subsequently, testing was conducted at border quarantine centres as many nationals continued to come back to Eritrea from neighboring countries through legal and illegal border crossings. On 2nd April 2020, a 21-day nationwide lockdown was imposed and was subsequently extended indefinitely.

As of 31st December 2020, the total confirmed COVID-19 cases were 1,320 with 676 confirmed recoveries and 3 recorded deaths from patients who were on COVID-19 treatment. On March 23, 2021, following a year of implementing the lockdown measures, the government announced the gradual easing of the measures including the reopening of schools by April 1, 2021 and the resumption of public transport.

Measures such as wearing facemasks and sanitation will remain in force. In addition, travel between cities and villages remains banned. The MoH continues to deliver essential health services to the public through existing health service delivery hubs.

### Major Achievements

**1. Readiness Assessment:** WHO supported the MoH to conduct a baseline readiness assessment which guided the implementation of identified evidence-based interventions. Among the 9 COVID-19 thematic pillars assessed. The laboratory, infection prevention control (IPC), case management and surveillance were identified as weak. The WCO



Donation of COVID-19 related items for continuity of health services by WHO to MoH. Dr Goitom Mebrahtu, Director of Medical Services of MOH received the items

advocated for the conduction and use of the COVID-19

- 2. Country Readiness Assessment Report.** The office supported the orientation of laboratory technicians on COVID-19 diagnostic and polymerase chain reaction (PCR) testing procedures.
- 3. Enhancing surveillance:** The WCO supported surveillance activities including provision of updated guidelines, COVID-19 Standard Operating Procedures and case definition tools. Health workers were oriented on the updated guidelines.
- 4. Laboratory/testing capacity, activities (starting 17 May, random testing in Asmara):** The WCO provided WHO's updated Guidelines and Standard Operating Procedures to the MoH for laboratory management of COVID-19. Laboratory staff were trained on safe handling of infectious and hazardous materials. The adaptation of WHO PCR techniques and guidelines were also supported. Eritrea adopted the use of WHO-recommended real time PCR antigen testing for COVID-19 confirmation

## 10.1 Infection Prevention and Control (IPC)

Some of the support provided by WHO in IPC are as follows:

- 1. Procurement:** Procured and distributed personal protective equipment (gloves, masks, goggles and gowns) to MoH.
- 2. Simulation:** Supported a simulation exercise at Asmara International Airport point of entry and Villago hospital treatment center
- 3. Updated guideline:** Supported the MoH to update the National IPC guideline to include updated information on COVID-19
- 4. Orientation:** Health workers were oriented on the use of the National Guideline.
- 5. Support:** Led by WHO, the UN supported the MoH, Ministry of Education (MoE) and the Water Resources Department (WRD), in providing water, sanitation and hygiene (WASH) in health facilities and schools, through provision of soap and support for local production and distribution of hand sanitizers as part of the COVID-19 response
- 6. Capacity building:** WHO provided training materials, videos, and interim guidelines to the national and sub national health facilities to build capacity.

## 10.2 Case Management

WHO supported the MoH to adapt the interim guidelines and SOPs on COVID-19 case management. Treatment centers and health facilities follow these standard IPC and case management protocols. In addition, the WCO conducted training of health workers on COVID-19 case management.

## 10.3 Coordination with UN agencies and development partners

The WCO provided guidance to UN agencies in the sourcing, specification, quality of equipment, reagents and essential supplies for COVID-19 response using approved WHO guidelines. WHO coordinated the development of both the National and UN COVID-19

preparedness and response plan and mobilized US\$ 2.5 million resources to support the plan. The WHO played a key role in bringing together partners and mobilizing resources. Within the UN Country Team (UNCT), the WHO led the meeting in sharing regular COVID-19 updates to UN agencies. This included technical analysis of the situation to identify the critical areas of support needed. Furthermore, WHO coordinated the UN support to MoH's division of labor based on agencies' comparative advantage. The WHO facilitated and coordinated UN technical working groups which developed the UN preparedness and response plan.

During the early phase, the briefing to the diplomatic corps was on COVID-19 general information, key public health measures and advocacy for resource mobilization to support contingency plans. Moreover, WHO held one-on-one meetings with development partners to further explore resource mobilization opportunities to support the COVID-19 response.

## 10.4 Other investments during COVID-19 Pandemic

The country undertook, with WHO support, 2 important evidence generation exercise, namely: International Health regulations (IHR assessment) and COVID-19 country readiness assessment. The results of the above assessments provided key evidence and guidance, to a large extent, the calibrated investments made by Eritrea.

## 10.5 Continuing Essential Services

The WCO supported the country's efforts to continue providing essential health services despite the COVID-19 pandemic. These were;

- 1. Polio surveillance acute flaccid paralysis (AFP) activities.** The WCO facilitated two rounds of shipment to the regional reference laboratory in Addis Ababa
- 2. Supported introduction of Men A into the routine immunization to boost immunization update**
- 3. Provided financial support to ensure uninterrupted services and logistics**



An infant received a vaccine in one of the health care facilities. Photo © WHO Eritrea

## 11.0 Immunization and Vaccine Preventable Disease Control in Eritrea

### 11.1 Immunization Program in Eritrea

In 2020 and 2021, Eritrea provided routine immunization services 6 days per week in 302 (85 percent) health facilities in the country. Outreach vaccination services are also provided in every catchment areas of these health facility. There are 450 outreach sites in the country. Periodic Intensified Routine

Immunization (PIRI) services are implemented every quarter for nomadic population groups and people living in 16 hard to reach and less accessible districts. As of December 2021, the National Immunization targets includes antigens against 12 vaccine preventable diseases.

The EPI program has a central as well as regional cold chain stores. There are four immunization supply chain levels in the country, at National, Zoba, sub-Zoba, and service delivery points (health facilities). Currently, there is a net positive storage capacity at national and Zonal level to store all vaccines for routine and supplementary immunization activities.

### Major Achievements

#### 11.2 EPI Coverage Survey

With WHO financial and technical support, the country conducted the EPI coverage survey in February and March of 2020 using WHO tools and guideline. The survey results revealed that 99.9 percent of children aged between 24 to 35 months, had vaccination card where vaccination of children was recorded. A vaccination card was seen for 97.7 percent of the children. The proportion of children with vaccination card seen has shown significant increase from that reported by the 2010 Eritrea Population and Health Survey for children aged 12-23 months (85.2 percent) while it was similar with that reported by the 2017 EPI coverage survey (97.2 percent).

Overall, 95.1 percent of the children aged 24-35 months were fully vaccinated in all the eight antigens (Bacillus Calmette Guérin (BCG), three doses each of

oral polio vaccine (OPV) and 5-in-1 vaccine also called PENTA, and Measles containing vaccine first dose (MCV1)) based on information observed from vaccination card and mother's reports. The results show that 99.4 percent had received the BCG vaccine, 98.9 percent had received OPV 3 vaccinations, 98.8 percent had received Penta3 vaccinations, and 96.9 percent had received MCV1 vaccine. If information from the card is only considered, the full vaccination coverage would be slightly lower, standing at 92.4 percent with coverage of 97.1 percent for BCG, 97 percent for OPV3 and percent Penta3, and 93.8 percent for MCV1.

Overall, 93.3 percent of mothers had received at least two doses of tetanus, diphtheria, and pertussis (Td) vaccines; which was slightly lower at 95.4 percent compared to the estimate reported by the 2017 EPI coverage survey. The proportion of mothers who received at least two doses of Td was 98.7 percent. Mothers in urban areas were more likely, at 95.5 percent, to receive at least two Td doses than those in rural areas 92.2 percent.

### 11.3 National EPI Program Review integrated with Men A Post Introduction Evaluation

WHO provided financial and technical support to the MoH to conduct National EPI program review integrated with Men A Post Introduction Evaluation in June-August 2021.

The objectives of the program review were to; Assess the status of performance of the immunization programme and Vaccine Preventable Diseases (VPD) surveillance over the past 5 years (2017-2021);

- To assess the effect/impact of the health system and external environment on EPI performance over the past 5 years
- To assess the effect of the newly introduced vaccines in the immunization program
- To assess the performance of the surveillance of vaccine preventable diseases in line with IDSR; and

- To provide recommendations which will be used as input for the development national immunization strategic Plan 2022–2026.

The review covered the program at national level, all the six zobas (regions), a random sample of 18 sub-zobas (Districts) and 54 health facilities. In each zoba, the sub-zobas were selected using probability proportional to size (PPS) sampling method from the high, medium, and low performance sub-zobas while the health facilities were selected using systematic random sampling method. The desk review was carried out by the National Immunization Technical Working Group (TWG).

Field review data was collected from a total of 200 key informants at all levels and a total of 252 mothers/caregivers through exit interview. Moreover, observation was made to the vaccination sessions of 232 children. The review highlighted the achievements and best practices, identified key barriers and challenges, and has come up with key recommendations on several immunization components including external environment issues.

Addressing the programmatic gaps identified in this review is expected to improve programmatic performance for achieving the objectives and targets that will be set in the next five years. Based on the key findings and recommendations as well as inputs of this review, the National EPI program and its stakeholders will make the necessary arrangements to develop the national Immunization strategic plan for the period 2022–2026.

### 11.4 Human Papilloma Virus Vaccine Introduction Plan (HPV)

Human Papilloma Virus Vaccine (HPV) is one of the recommended primary prevention interventions for cervical cancer. Eritrea is preparing to introduce HPV vaccine for girls aged 13-14 years in two consecutive doses, 6 months apart, in June 2022. WHO/Country Office and WHO/IST RTWG provided technical assistance to develop a proposal for resource mobilization and fund was approved by GAVI the Vaccine alliance.

## 11.5 Objectives of HPV Vaccine Introduction

- To introduce HPV vaccine into the national routine immunization programme among girls aged 13 years and achieve >85 percent coverage
- To strengthen the existing vaccine preventable, diseases surveillance system and plan for the establishment of cervical cancer sentinel surveillance sites
- To strengthen multi-sectoral collaboration with Ministry of Local Government, Ministry of education, National Union Eritrean Youth Students, National Union Eritrean Women, Ministry of Local Government and Social Welfare, faith organizations and so on, to reach in and out of schoolgirls and achieve >85percent coverage
- To increase community awareness on HPV vaccination, hence; increase uptake of the vaccine doses as per the recommended schedule.
- To monitor impact of HPV vaccine through screening and post introduction evaluation

The target population for HPV vaccine are girls aged 13-14 years estimated to be 59,236. As per the socio-cultural context in Eritrea, underage marriage is common, therefore; vaccinating girls at 13 years of age gives the girl protection against HPV infection as this age is also considered the average age of menarche. To avoid wastage rate of the vaccine, a low single age cohort and five dose presentations will be used.

## 11.6 Sustainable Outreach Immunization Services (SOS)

To improve immunization coverage in hard to reach areas, Reach Every District (RED) strategy had been implemented in the country since 2006. Reports from areas where SOS was implemented, it shows improvement in immunization coverage, but most of the selected hard to reach areas the immunization coverage is still below 65% and needs implementation of at least 3 rounds of SOS each year. The population unreached by routine immunization are rural population who are nomadic and seasonally mobile and live in a very distant place where they have difficulties to contact the

national health infrastructure. To reach the unreached children with immunization and other services, all the six regions (zones) have adopted Reaching Every Child /District (REC/RED) Strategy to improve access, utilization and provide equitable and accessible immunization services for all children and Women in Reproductive Age Group (WRAG). The main challenges are to reach the hard to reach and migratory populations, due to lack of sufficient financial and human resource. Based on this WHO has been providing funds for the Direct Implementation of SOS in Zoba SRS, Anseba, NRS and Gash Barka in 2020 and 2021.

Based on the 2020 and 2021 budget plan, 3 rounds of SOS was implemented in hard to reach areas and nomadic population of 16 districts where most of them are located in the Eastern and Western low land of the country. The SOS was targeted to children less than two years and women of child bearing age for immunization and other health care services were delivered to the population residing in rural areas and seasonally mobile population.

Each year a total of 16,318 children and 4,927 women within child bearing age were vaccinated against 12 child hood diseases and Tetanus and diphtheria containing vaccine respectively. To make the SOSs more effective other health care services were also integrated and a total of 804 pregnant women received antenatal care; 108 post-natal care and 18,977 people participated in health education sessions.

## Challenges

- One of the main challenges in immunization program is to reach the hard to reach and migratory populations, this is due to lack of transport, inadequate fund and human resource.
- The population unreached by routine immunization and disease surveillance services; are rural population who are nomadic and seasonally mobile and live in a very distant place where they have difficulties to contact with the national health infrastructure.
- There is no sentinel surveillance system in place to investigate and report congenital rubella syndrome (CRS) cases, and no review has been done to date.

- The country has not yet established National Measles Verification Committee (NVC). Eritrea needs to establish national verification committee to document the progress with measles elimination.
- Risk assessment is done on quarterly bases and reveals that there is high cross border population movement residing in the borders of Sudan, Ethiopia and Djibouti. These people are at high risk for polio and circulating Vaccine Derived Polio Viruses (cVDPV) importation from Sudan, Ethiopia and South Sudan.
- EPI and Surveillance activities not synchronized with neighboring countries,

## Way forward

- Conduct Periodic Intensification of Routine Immunization in 16 districts with less accessible geographical areas and nomadic population.
- Training of the health workers on updated EPI Module
- Conduct supportive supervision using ODK/Geo-coded application.
- Implementation of Human Papilloma Virus Vaccine (HPV) introduction
- Implementation of Measles/Rubella follow up vaccination campaign
- Develop plan of action for COVID-19 Vaccine introduction

## 11.7 Surveillance of Vaccine Preventable Diseases (VPD)

The Ministry has a network of health infrastructure, with clear and detailed articulate EPI/ Surveillance goals, priorities and plans. EPI and IDSR focal points exist at all levels. Health management information system (HMIS) is also available at all levels with IDSR and immunization data collected using this structure. The surveillance structure of the country is linked to the community through health facilities. IDSR guidelines are available at all levels together with training, reporting forms and specimen collection kits.

The timeliness and completeness of weekly and monthly reports are the main surveillance system indicators. There are 266 health facilities located in the six Zobas, reports are collected by each Zobas before submitting to MoH/HQ. To be timely, each health facility reports within 3-5 ending days of the week and is submitted to Zonal and National office. However, the report is considered untimely/late if it reaches after 3 days including the National Referral Hospital reporting to the IDSR/HQ. The monthly report should reach within three to five days of the preceding month to the Zonal and the Central offices respectively.

IDSR still maintains its focus on the priority diseases that are targeted for:

- Elimination/ eradication (Neonatal Tetanus, Acute Flaccid paralysis polio, Dracunculiasis, Measles/Rubella)
- Epidemic prone diseases (Cholera, Shigellosis, Plague, Viral Hemorrhagic Fevers (VHFs), Yellow Fever, Meningitis)
- Diseases of Public Health Importance (Diarrhea in < 5 years old children, Pneumonia in < 5 years old children, HIV/AIDS, Malaria, STIs Tuberculosis, Rabies, Infectious Hepatitis, Schistosomiasis).
- In addition, Reports and rumors from the community of unusual Health events are investigated, & action taken.

Eritrea is in the process of adapting the 3rd edition Generic WHO Technical Guideline.

## Major Achievements

### Active AFP/ Measles/Rubella, Meningitis (PBM), Rotavirus and NNT Surveillance.

Eritrea is among the countries who have designed strategies used to eradicate Polio and eliminate Measles, NNT, and Meningitis through active cases search of Vaccine Preventable Diseases (VPD). WHO and other partners provided financial and technical support to the MoH, IDSR unit on quarterly bases to implement active AFP/ Measles/Rubella, Meningitis



(PBM), Rotavirus and NNT Surveillance in all the health facilities in the country. Active surveillance for AFP involves a very sensitive system that enables rapidly detecting, reporting, investigating and responding to confirmed poliomyelitis cases. Surveillance staff collect data from individual cases, registers, medical records or log books at a reporting site to ensure that no case is missed. 257 sites were visited according to their priority sites (46 high priority sites, 74 medium priority sites and 137 low priority sites).

In 2020 and 2021 a total of 165 and 95 AFP cases were detected respectively in the country. All the samples were sent for viral isolation, to Ethiopia National Polio and measles Lab and the results of the cases arrived and all of them were negative for wild polio and they were discarded by the National Polio Expert Commit-

tee (NPEC). All zobas achieved the Non-polio AFP rate of  $\geq 2/100,000$ . The non- AFP case detection rate is achieved. The non-Polio NPEV rate this year decreased to around 10%, an important indicator which shows that of cold chain is maintained. As can be seen from table 2, there was no wild polio virus, vaccine derived polio virus or compatible cases.

## 11.8 Laboratory Containment Inventory and survey for WPV/cVDPV

The country conducted Laboratory Containment Inventory and Survey in 2020 with WHO financial and technical support. A team was established made up of the focal points on containment from both Ministry



Participants who attended a virtual training of trainers on clinical management of Visceral Leishmaniasis. Training was facilitated by AFRO and HQ

of Health (MoH) and the WHO Country Office (WCO). A total 38 laboratories/ facilities were surveyed. 38 (100%) inventory/survey templates were received. Thus, attaining a 100% respondent rate; 38 (100%) laboratories/facilities did not have WPV3 or cVDPV3 infectious materials and potentially infectious materials; All the quality indicators were rigorously implemented which did ensure quality outcome, despite the COVID-19 restrictive movements and challenges. Feedback to laboratories/facilities were promptly responded to, which aided in the timely survey implementation in 38 laboratories. The report and the national master templates were shared to AFRO/IST/

HQ for feedback and was finalized the for required processes for AFRO validation.

## 11.9 Measles/Rubella surveillance and trends of disease incidence

Eritrea established measles case-based surveillance, with the support of a national serological laboratory for the confirmation of measles cases starting in 2005. Measles surveillance protocols as well as the methods and tools used by the measles serological laboratory network are standardized across the WHO African Region.

\*The laboratory confirmed measles cases detected in 2021 are all adults and young adults who have not been vaccinated with measles vaccine. Between 2016 and 2021, Eritrea reported a total of 1,222 suspected measles cases through the case-based surveillance system, of which 230 were confirmed by laboratory, epidemiological linkage, or clinical compatibility. On average, annually, 150 suspected measles cases were reported through the case-based surveillance system. There were 278 laboratory confirmed rubella cases in the same period.

The national level target of Non-Measles Febrile Rash Illness cases per 100,000 population (NMFRI) has been met since 2016. The country incidence rate of measles was less than 1 measles case per million in 2019, 2020 and, 2021. The peak period of measles occurrence in Eritrea is between January and May in most of the reporting years. Similar peaks are seen in the occurrence of lab confirmed rubella cases in the first half of the year.

Based on the surveillance result, the country has now reached measles elimination phase. The surveillance system demonstrated decline in confirmed measles cases to negligible level which is the sign of successful measles control activity. Despite the high measles vaccination coverage in all districts in the country (>95% JRF), there were few measles sporadic cases with laboratory confirmed cases in adults. In 2019 to 2021, more than 33% of the Zobas have sent blood specimens to the National Laboratory for confirmation and 438 suspected measles cases were reported to the National Lab, out of which 26 were positive for measles Igm (confirmed cases).

Of the total cases more than 88% of the Measles cases were adult, which were likely not immunized when the programme was not well established and did not seroconvert after their vaccination. The national annual measles investigation rate, minimum target was 2-3 per 100,000 populations is achieved in 2016-2021. The National level target of Non-Measles Febrile Rash Illness cases per 100,000 population (NMFRI) of 2016-2021 has been met. Annually, still measles and rubella IgM positive cases are observed.

Moreover, the country is intertwined between Ethiopia and Sudan where there are high measles outbreak in the

countries. Therefore, the country is at risk of measles importation due increasing potential population mix dynamics and high cross border population movement. The measles confirmed cases by age category trend analysis shows that prevalence of cases is more in the age group above 5 years. The trend by year also shows declining in all the categories.

However, positive cases are still observed in all the age groups. There was no measles outbreak in the last 3 years, but sporadic measles cases were observed in some districts bordering to neighboring countries. In general measles prevalence shows significant reduction after the SIA of 2018. There could also be children who missed the first dose or the second dose of MR vaccine especially in areas with less access, hence to reach the left behind children and fill the communicative immunity gaps, it is important to conduct measles follow-up campaign.

Eritrea has carried out MR catch-up campaign in 2018 for children age 1-14 years. WHO advises countries to conduct a follow-up campaign after 2-3 years after the catch-up campaign for children age 9-59 months to build the herd immunity and fill-up the possible immunity gaps of vaccination of children age 9 months, months and zero dose children.

Except Maekel region all regions/zobas and most of the district in these regions are bordering to Ethiopia, Sudan and Djibouti where routine immunization coverage of Measles is low and frequent measles outbreaks are also observed every year. There is a continuous informal cross boarder movement of the population for business purposes and also as nomadic population groups to look water and grass for their animals. In Eritrea, even though routine immunization coverage of MR is high especially at 9 months of age of a child, there is high dropout rate during the second MR dose uptake. Considering this and immunity gaps available at the age of 9 months of 85 % efficacy rate of measles and the above-mentioned reasons there is a need of conducting MR follow-up campaign to build the herd immunity and prevent cross boarder infection of sporadic measles cases.

In the MR follow-up campaign, the EPI program has planned to apply all strategies to reach the unreached children and address zero dose children. Fixed and temporary vaccination sites will be organized for average 7 vaccination days and moreover mobile teams will be deployed to hard-to-reach areas using all means of transport such as fit rental vehicles, camels, and boats to transport the EPI logistics and vaccinators.

The campaign is planned nationally in all districts. The target population for the campaign will be children aged 9-59 months taken 12% of the total population of 2022 (3,769,550). The birth cohort of these age group is estimated to be 452,346. The main reasons for the MR follow campaign are:

- There is frequent cross border movement to and from Ethiopia, Sudan, and Djibouti since most of our district have a borderline to this country and there is possibility of importing vaccine preventable diseases especially measles and rubella from these countries.
- Dropout rate of MR1 and MR2 is more than 10% (EPI Coverage survey, 2020)
- Zero dose and under immunized children are also found during PIRI.
- In areas with less access MR2 vaccination coverage is < 80%.
- Vaccine efficacy rate of the measles vaccine for the first dose is 85% and for the second dose is 93% and there is an immunity gap in the community.

## 11.10 Meningococcal Disease Surveillance and Incidence

Eritrea is in the meningitis belt and contributes to lower the epidemic risk in all parts of the belt by further building a geographic herd protection and maintaining the benefits of the mass campaigns conducted in neighboring countries. The country experienced sporadic outbreaks of meningococcal disease in the past, in the Southern and Western part of the country bordering Ethiopia and Sudan. Confirmation of the causal meningococcal serogroup was not always determined.

However, circulation of Neisseria Men A was reported in the past 13 years in various sites almost on a yearly basis and outbreaks were reported in Gash Barka (Tesseney, Barentu and Molki) and Zoba Debub (Adi-Quala and Mai-Mine); in Northern Red Sea Zone (Foro). However, since 2010 no meningitis outbreak was reported in the country. Based on the meningitis risk assessment results and geographic location of the country, preventive Men A and vitamin A supplementation vaccination campaign were conducted for wide age range in 2019.

Thereafter, the country conducted a post campaign coverage survey with WHO financial and technical assistance. The survey was integrated to include EPI, Men A and Vitamin A supplementation campaign and was implemented by WHO with the support of international consultants. It was designed to be national representative and carried out using the new WHO guideline undertaking EPI coverage surveys was conducted. A total of 2,747,862 people was vaccinated recording a 95.8 percent coverage at the National level.

Following a wide age range campaign, Men A conjugated vaccine was introduced into routine immunization program in June 2020 for children at 18 months of age. The country also took the opportunity to strengthen the surveillance for bacterial meningitis program. During the Men A and vitamin A supplementation campaign, a training was given on Men A vaccines to the EPI and surveillance focal persons in all health facilities of the country. WHO guidelines and data collection tools were developed during the campaign. Hence, the country introduced Men A vaccine to the routine immunization program successfully in June 2020.

### 2.1.5. Pediatric Bacterial Meningitis (PBM)

Eritrea established a sentinel site of the Pediatric Bacterial Meningitis (PBM) network in Orotta Pediatric Teaching Hospital in Asmara in 2005. Since then a total of 418 Cerebrospinal Meningitis (CSF) samples of suspected meningitis cases (data collected in the PBM network concern < 5-year-old children only) were collected out of which 21 (percent) were positive including 3 Neisseria meningitidis (Nm).

No Nm sero-grouping results are available for this report, as of December 2021. Nineteen countries among the 26 in the meningitis belt have succeeded in eliminating the risk of meningitis A outbreaks with a

tremendous regional public health effort and achievement being currently underway.

## 11.11 Rota virus Surveillance

The Rotavirus sentinel site was established in 2010 in Orotta Pediatrics Hospital. Training and sensitization of the surveillance staffs in the hospital was given on a yearly basis and the working tools have been updated. At the beginning, 53 specimens were collected of which 22 (40 percent) of the cases were positive for Rota Virus. In 2020, 80 stool specimens were collected and tested for rotavirus, of which 24 (30 percent) were positive. However, no detailed report was generated in 2020 and 2021. Rotavirus testing kits was procured by WHO and delivered to MoH, National Health Laboratory. However, the sentinel sites are only confined in Asmara National Referral Hospitals and has to be expanded to other Zoba.

## 11.12 Maternal and Neonatal Tetanus Elimination

In Eritrea, provision of tetanus toxoid vaccine (Td) is one component of ANC services, and is provided to pregnant and non-pregnant women of childbearing age, 15-49 years old. Td is given to prevent tetanus in newborns and women during delivery in unhygienic environments. The EPI coverage survey of 2020 indicates that the average household size of the surveyed households for the mother's immunization was 5.4 persons. The results of the mother Td immunization survey revealed that 93.5 percent mothers reported that they had a Td vaccination card and other document.

Consistent with the fact that higher proportion of mothers reported delivering at health facilities (68.5 percent), the assistance given during delivery was predominantly from skilled health personnel. Nurses aided 43.4 percent of deliveries, midwifery to 31.8 percent, doctors to 7.9 percent, and community health workers to 0.7 percent and 15 percent of the deliveries were assisted by traditional birth attendants and 8.7percent by relatives or friends.

Overall, 93.3 percent of mothers had received at least two doses of Td vaccines, which were slightly lower compared to the estimates reported by the 2017 EPI

coverage survey of 95.4 percent. Mothers in urban areas were 95.5 percent more likely to receive at least two Td doses than those in rural areas at 92.2 percent hence mothers in urban areas were 90.7 percent more likely to be protected against neonatal tetanus than those in rural areas at 84.7percent.

Like the 2017 EPI coverage survey estimate of 88.4 percent, in 2020, 86.8 percent of children were protected against neonatal tetanus. The likelihood of protection against neonatal tetanus by background characteristics of mothers have similar pattern as to that of mothers who received at least two doses of Td injections.

The level of protection has shown significant increases with an increasing age of children of mothers from 81.4 percent of mothers below 25 years of age to 87.5 percent of children of mothers aged 35 years and above. Level of education of mothers also plays significant positive role towards protecting children against neonatal tetanus. More than nine in ten of children of mothers with some form of education were protected compared to three-fourths of children to mothers with no education.

The survey results also showed that 44.6 percent of the mothers did not receive vaccinations because they were unaware of the need of vaccination while 37.6 percent were not aware of the need to return for subsequent doses. Others, 8.4 percent reported that the place of immunization too far while 6.8percent reported that the busy nature of their work as the reason why mothers did not get the Td injections.

## 11.13 Integrated Supportive Supervision (ISS/ODK)

Supportive supervision is an effective strategy for continuously enhancing staff performance. It is carried out with the focus on using supervisory visits as an opportunity to improve the knowledge and skills of health staff. An Open Data Kit (ODK) was used to build a data collection form for survey. The collected data was aggregated and sent to the servers in Asmara and was collated and extracted to useful formats.

These supportive visits are automatically mapped on a WHO server in AFRO. The IDSR modular training was given in 2020 and 2021 to 950 health care workers to

build capacities for the entire health care system. Trainings of IDSR modules were held in each Zoba bringing together IDSR Focal Points, heads of District Hospital Laboratories and Data Managers.

Epidemics and rumors from communities and health facilities have been promptly investigated and appropriate control measures taken. The training was funded by WHO and the fund was transferred to the Ministry of health on quarterly bases in 2020 and 2021 respectively. However, there were delay of financial settlement and delayed transfer of the fund to the MOH.

An important indicator of a good-quality reporting system is the timeliness and completeness of reporting at each level. All zones achieved the target set by WHO (i.e. ≥80%). Monthly timelines all zone achieved greater than 90% and in the monthly completeness is 100% for all the zones. The weekly timelines score is greater than 90% with the lowest coverage is Zoba Gash Barka and SRS which is 92% and the rest. While the completeness of weekly report for all the zones is 100%. WHO has also printed and delivered Integrated Disease Surveillance and response (IDSR) case investigation and reporting forms of 174,000 copies to the MoH, IDSR Unit and weekly, monthly and quarterly reports are delivering accordingly.

### Main Challenges

- Lack of secured budget for IDSR activities.
- Transportation problem for supportive supervision and active AFP/Measles NNT search surveillance.
- Transportation problems for active search surveillance.
- Difficulty in shipping lab specimen from remote health facilities. (due to of lack of transportation and budgeting)
- Communication problems for reporting priority diseases.
- Weak community-based surveillance.
- Poor integration with different programs especially in outbreak situations.

- Delay in budget transfer both at the MOH and WHO.
- shortage of office instrument tools, updated and new laptops, desktops, printer LCD, camera etc.
- Low detection of New vaccine surveillance (Rotavirus and PBM) at the sentinel site.

### 11.14 Ways forward

- Capacity building of health worker in surveillance
- Sustain National and Global indicators for surveillance.
- Strengthen comprehensive community-based surveillance and awareness on surveillance in nomadic and migrating communities as well.
- Strengthening Laboratory capacity to confirm the priority disease timely.
- Strengthen communication to exchange surveillance information to all levels to take an appropriate and timely preventive and control measure.
- Epidemic preparedness and response: in terms of structure establishment, manpower and other logistics.
- Strengthen Supportive supervision, monitoring and evaluation of the implementation of integrated diseases surveillance.
- Strengthening and expand sites of Meningitis and Rota virus surveillance in the sentinel priority referral pediatric hospital.
- Strengthen Active AFP/Measles/MNT surveillance

Table 4. Summary report of the Integrated Sustainable Outreach Services (SOSs) conducted in Gash Barka, Anseba, NRS and SRS in 2020 and 2021

	Zoba	Gash Barka	Anseba	NRS	SRS	Total
No.	Sub- zones	Kerkebet, Sellaa Gogne, Forto Sawa	Asmat, Asmat and Aditekelezan	Afabet, Foro and Gelalo	Araeta, Maekel and Debub Denkalia	
1.	Health Education attended	6,972	4,268	4,172	3,565	18,977
2.	Children < 2 years, vaccinated	4,843	3,670	3,587	2,164	14,264
3.	Children < 2 years vaccinated against M/R vaccine.	501	524	537	482	2,044
4.	Non-pregnant women, received Td	602	989	1,299	985	3,875
5.	Pregnant Women received Td2+	251	287	314	190	1042
6.	Pregnant, Women received Ante-natal care	127	219	291	167	804
7.	Women, received post-natal care	30	21	34	23	108

Figure 5: Sustainable Immunization Outreach Services (SOS) in Eritrea

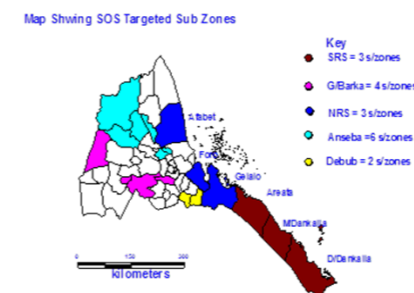


Figure 6: AFP detection rate by subzone, 2020. (MoH, IDSR unit 2021)

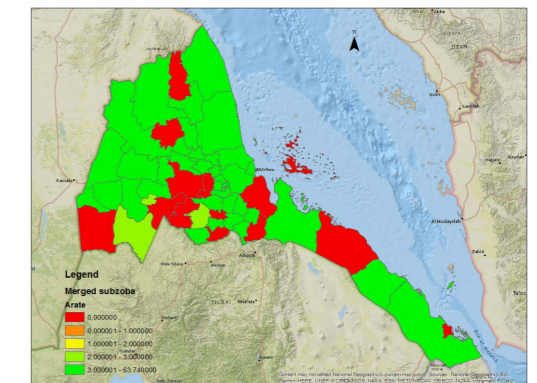


Table 5. AFP cases detected, detection rate & stool adequacy 2012-2021 (MoH, IDSR unit 2021)

Indicator	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total NP-AFP Cases	58	63	63	71	100	104	128	114	145	115
NP-AFP Rate	3.5	3.4	3.3	4.3	6.01	6.08	7.3	7.2	7.8	7.3
Stool Adequacy Rate%	100	100	100	98.2	100	100	100	100	100	100
Compatibles	0	0	0	0	0	0	0	0	0	0
WPVS	0	0	0	0	0	0	0	0	0	0
NPEV	6	5	8	5	6	13	25	10	15	10

Table 6. Measles suspected and confirmed cases from 2016 to 2021 in Eritrea. Source: IDSR Annual report 2021

Indicator	2016	2017	2018	2019	2020	2021
Number of reporting regions	6	6	6	6	6	6
Number of suspected measles cases	237	179	172	186	153	99
Number of confirmed measles cases (target > 80%)	39	56	70	6	14	6*
Non-measles febrile rash illness (target >2/ 100,000 population)	10.1	7.4	4.3	2.6	3.9	2.6
Regions reporting >1 case with blood sample (target >80%)	66%	82%	100%	100%	100%	100%

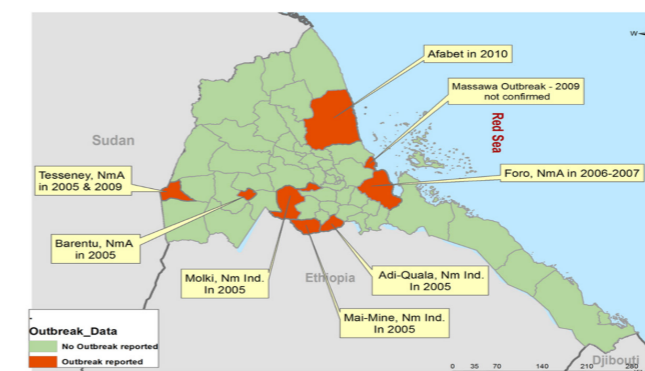
Table 7. Measles and Rubella cases by age categories in Eritrea 2016 - 2021

Year	Age categories	Under 9 months	9 - 23 month	24 - 59 months	5 - 9 years	10-14 years	15 and above	Total
2016	Negative	11	14	68	75	31	35	234
	Measles	4	1	10	12	3	49	79
	Rubella	3	1	17	16	7	5	49
2017	Negative	9	8	23	33	33	17	123
	Measles	1	4	5	5	14	13	42
	Rubella	1	0	1	1	0	0	3
2018	Negative	4	6	16	16	17	31	90
	Measles	2	1	4	5	10	26	48
	Rubella	0	0	5	4	1	0	10
2019	Negative	12	15	63	31	22	10	153
	measles	1	0	2	0	0	2	5
	Rubella	0	0	4	3	0	0	7
2020	Negative	9	8	36	32	13	8	106
	measles	0	1	1	1	1	6	10
	Rubella	2	2	3	5	6	1	19
2021	Negative	4	6	16	16	17	33	92
	measles	2	2	0	0	0	0	4
	Rubella	0	2	3	1	0	0	6

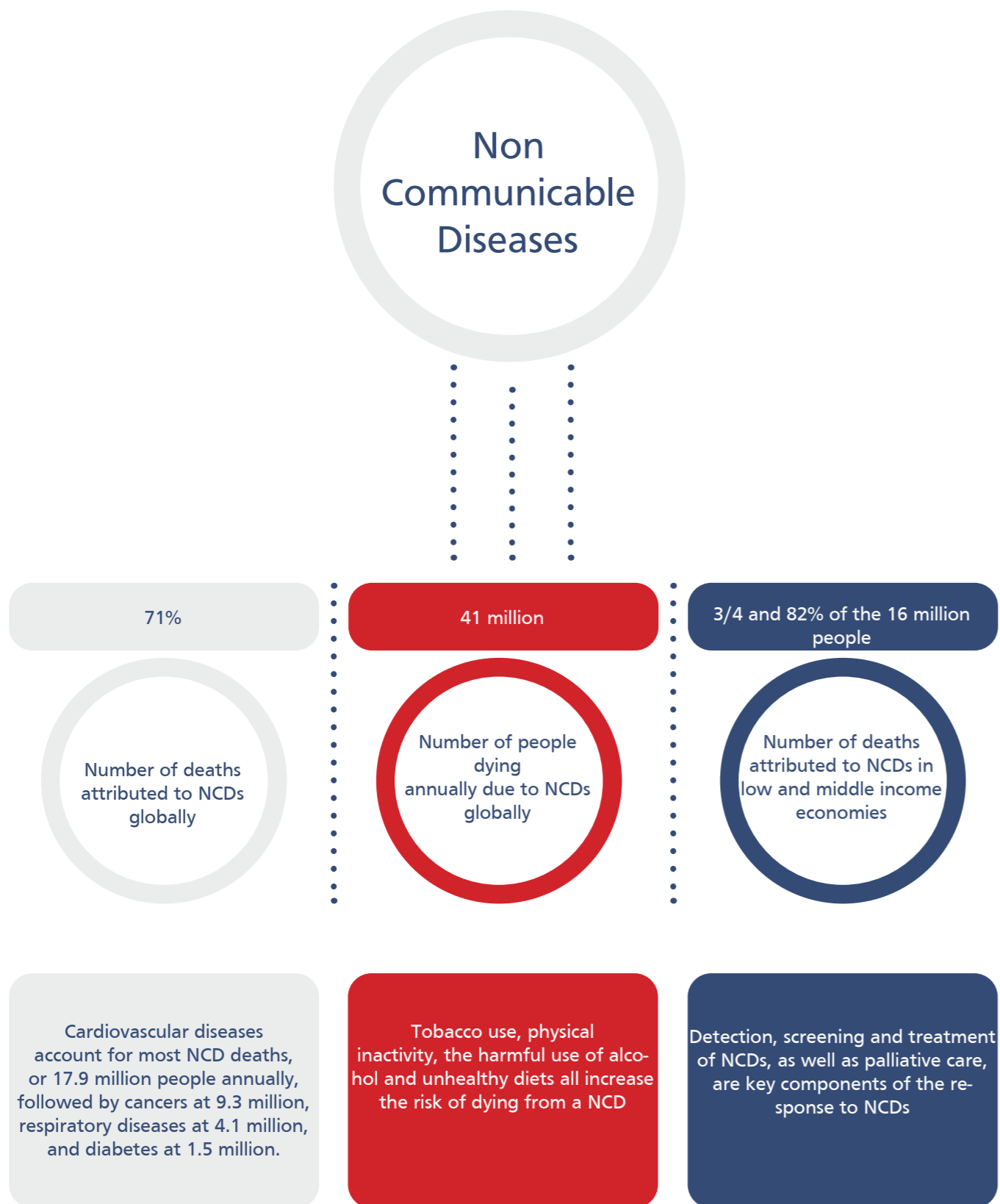
Table 8. Bacteriological test results from suspected meningitis cases among children < 5-year-old, in Orotta Paediatrics Hospital, Eritrea 2009-2021. Source - PBM database, Eritrea 2021

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Suspected Cases Total	81	22	70	50	42	62	32	15	30
LP Done (CSF Collected)	81 (100%)	22 (100%)	70 (100%)	50	42 (100%)	62	32	5	10
Culture Done	81	22	70	49 (98%)	42	60	30	15	30
Showed Growth	19	4	13	2	2	3	2	1	2
S. Pneumonia	2	-	-	1	-	-	-	-	-
N/ Meningitides	-	-	-	-	-	-	-	-	-
Other Organisms	17	4	13	1	2	3	2	1	2
No Growth	62	18	57	47	40	57	29	13	26
Died	0	0	0	0	0	0	0	0	0

Figure 7. Map of Eritrea indicating Meningitis outbreak between 2005 and 2016



## Non Communicable Diseases. A Global Perspective



Data source: <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>, accessed on May 19, 2021 at 10:00 am

## 12.0 NCDs, Eritrea Country Context

Chronic diseases are a major public health problems accounting for a considerable share of the national disease burden in low- and middle-income countries (LMIC), among which Eritrea belongs. The rise of NCDs has been driven by primarily four major risk factors: tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets. The epidemic of NCDs poses devastating health consequences for individuals, families and communities, and threatens to overwhelm health systems. The socioeconomic costs associated with NCDs make the prevention and control of these diseases a major development imperative for the 21st century.

In Eritrea, the WHO continues to provide leadership and the evidence base for action on surveillance, prevention and control of NCDs. Beyond prevention methods, management of NCDs is critical. This includes detection, screening and treatment of the diseases, as well as palliative care for those in need. The prevention and control of NCDs in Eritrea is guided by the WHO Global Action for the prevention and control of NCDs 2013-2020. On matters of cross-sectoral collaboration, the WHO is guided by the Global Coordination Mechanism on the Prevention and Control of NCDs in the management of NCDs in Eritrea.

### 12.1 2020 Activities

In 2020, the following activities were planned;

#### A. Health System Strengthening

1. Establish NCD committees at national and zoba levels
2. Develop and implement standards, manuals and guidelines
3. Conduct training of CHW on NCDs & their risk factors in each zone
4. Provide training of trainers (TOT) for selected nationwide health workers on WHO-PEN & other related protocols.

5. Conduct training of HW on WHO-PEN (early detection, prevention, control & management of MNCD)
6. Establish new NCD corners & NCD clinics in all zones and Equipped Health facilities with the minimum clinical equipment.
7. Development of CHW training manual & discussion guide
8. Conduct MNCD screening in NCD corners.
9. Conduct review meeting with the zonal NCD coordinators at national level & each zone annually

#### B. Health Promotion

1. Develop, Produce and distribute HP materials (stickers & posters)
2. Development of self-guided intervention packages to help patients with MNCD, risk factors and their families to monitor and manage their disease or condition.
3. Develop & distribute uniform national MNCD case reporting formats.
4. Develop & distribute uniform national Diabetes patient identification card (personal card).
5. Develop and implement an advocacy campaign to national, zonal, local community & religious leaders, and other partners that is consistent with and supportive of the national action plan for MNCD prevention and control.
6. Intensifying media campaigns using television, radio and printed media

### C. Strengthening Surveillance, Research and Monitoring

1. Conduct screening of RHD for students.
2. Nation-wide implementation of MNCDs monitoring & supervision activities using the supervisory check list at national & zonal levels.

#### 12.2 Activities Implemented

##### A. Health System Strengthening

NCD screening in NCD corners is ongoing .

##### B . Health Promotion

The routing NCD community sensitization at health facilities is ongoing

### C. Strengthen Surveillance, Research and Monitoring

There was no activity done because of COVID 19 pandemic and budget constraints.

#### 12.3. Epidemiology of Major Chronic diseases from NHMIS

The major chronic diseases including Cardio-vascular diseases, Cancer, Chronic Respiratory Diseases & Diabetes and their related complications generate a real and significant threat to Eritrea and are responsible for 51.7 percent of all deaths. According to the HSSDP II, the percentage of total deaths, under 70 years, in both sexes in Eritrea is mainly due to cardiovascular diseases at 37 percent, cancers at 27 percent, chronic respiratory diseases at 8 percent and diabetes at 4 percent.

Heart diseases (11.2 percent ) is the first cause of death, stroke (5.7 percent) is the seventh cause of death while Diabetes Mellitus (5 percent) is the ninth cause of death are among the ten leading causes of mortality in Eritrea. Cardiovascular disease is largely prevent- able. Most cardiovascular diseases and diabetes are brought about and complicated by some combination of smoking, high blood pressure, elevated blood cholesterol, unhealthy dietary habits, excessive alcohol consumption, obesity, a sedentary

lifestyle, and psychosocial stress. Reducing or ideally, eradicating them will lead to a reduction not only in cardiovascular diseases but also in other non-communicable diseases that share similar risk factor. Asthma is becoming one of the most prevalent chronic conditions affecting many Eritreans. Among the five major chronic non-communicable diseases; Asthma and Hypertensive have higher incidences, however, mortality due to Diabetic and heart disease is higher.

#### 12.4. Challenges and Constraints

1. Unavailability of fund & transportation are the major constraints of the program. However, the unit is partially functional and is collaborating with the Zonal branches & other programs
2. The unit does not sufficient IT equipment (LCD projector, efficient and enough computers and printers) for efficient and effective work for the Zonal NCD coordinators
3. Continuous reshuffling of HW and little or no space for NCD corner & clinic provided
4. Insufficient & low quality (easily broken) basic medical equipment at HCF
5. Shortage of medication/drugs needed for MNCD (diabetic drug, Anti-hypertensive drug and Asthmatic drug)
6. Inadequate experienced human resources in the MoH
7. Inadequate financial resources to procure and distribute relevant equipment and supplies to the MOH
8. Challenges in obtaining travel permit to conduct supportive supervisory visits

#### 12.5. Conclusions

1. Chronic diseases: Most of the chronic diseases like cardio-vascular diseases, diabetes, cancer, asthma, (chronic obstructive pulmonary diseases) are becoming a major public health concern in all developing countries.

### Pictorials



Above: travelling to the hard to reach areas of Zoba Anseba for immunization session (SOS)



Below: Immunization session (SOS) in the hard to reach areas of Zoba Anseba



Table 11: Number of Health workers trained on HCWM & IPC

Zone	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Maekel*				145			50	80	30	0	30
Debub			109	0	162	204	114	29	33	74	
Anseba	179	150	144	49	395	344	48	33	50	0	96
NRS						317	100	45	22	0	65
SRS			93	253	253	280	170	120	-	89	33
GB		72	167	198	265	206	150	0	94	72	0
National	1995	313	2023	645	2173	1351	632	307	229	235	224
Percent											

N.B: in addition to the above, 94 cleaners were trained on proper HCWM in SRS

2. Effective prevention and control of such diseases needs continuous capacity building of health workers and increasing awareness of the general public on the risk factors like smoking, physical inactivity, diet, and alcohol abuse. Such activities will require significant amount of budget allocation from government.
3. The RHD screening in school children was done in small scale by the Italian experts (UNCORE UN-MONDE MASSA).
4. Financial resources are required to provide prevention activities that are simple and cheap. (Needs an intervention by other UN agencies)

## 12.6 WCO Supports for NCDs and Mental Health Activities in 2020

The WCO provided technical and financial support to the MoH for institutional capacity building to provide quality and continuity of essential services. The implementation outcomes were:

1. National Multi-Sectoral Strategic Plan for Non-Communicable Diseases (NCDs) 2019-2023 finalized printed and distributed.
2. As part of health system strengthening and continuity of essential health services, one - year supply of different types of Insulin (Short, Intermediate, and mixed types) and Glucagon was supplied by WHO to seven hospitals.
3. Some essential equipment supplies and essential drugs were procured for the lower health facility and community hospitals levels.
4. Risk factors reduction on Chronic NCDs and mental illness facilitated and supported by providing updated guidelines and offline teaching materials WHO video courses and lectures

## 12.7 Mental Health

The vision for mental health service in Eritrea is to reduce the incidence and prevalence of mental disorders and improve mental health of the people of Eritrea by attaining equitable, accessible and cost-effective mental health care services for all people in Eritrea through the provision of comprehensive and community based

mental health services integrated with other health services, provided by skilled personnel, with the involvement of all stakeholders. Most of the planned activities were not implemented mostly due to budget constraints and partly due to low focus on Mental Health Program especially at zonal level. However, some activities from within and outside of Mental Health planned activities that have been conducted were as follows;

1. A 7 days ToT workshop on the Mental Health Gap Action Programme (mhGAP) was conducted for physicians and psychiatric nurses IG and reached 42 health workers.
2. 7-day trainings on mhGAP were conducted in targeting 40 health workers from Central, 35 from NRS and 30 from Debub, Anseba and Gash zones each.
3. 900 copies of the second version of the Mental Health Gap (mhGAP) Intervention Guide aimed at promoting improved access to mental health services at primary health care level were adapted, printed and distributed.
4. Mental Health Policy and Strategic Plan of action 2019-2023 have been finalized, printed and distributed.
5. Procurement of psychotropic medicines still in process.
6. Awareness training on mental health for 150 11th grade students in Ryesi – Adi (Embaderho) and for 500 11th grade students in Barka Secondary School in Asmara secondary school aimed at preparation to Sawa conducted for.
7. A mental health sensitization organized by MoH branch in SRS zone was conducted targeting 298 teachers and some community members in Southern Red Sea.

## 12.8 Recommendation

1. There is a need for all zones to consider establishing regular separate mental health OPD service and IPD ward with separated beds to provide comprehensive mental health services.

2. There is “no health without mental health” and thus adequate emphasis should be given to mental health at all health divisions and other sectors
3. Advocacy for the allocation of adequate human and financial resources to mental health interventions should be strengthened,

## 12.9 Proposed Way Forward

1. Fasttrack the appointment of the Regional MentalHealth focal person and Coordinators in the 2021-2022 FY
2. Develop a training manual for community mental health workers by December 2021
3. Conduct mhGAP ‘Training of Trainers and Supervisors’ workshops for 150 health workers composed of doctors, psychiatric nurses, public health Officers, degree nurses, pharmacist and physiotherapist for 7 days at 6 zones by December 2021
4. Increase mental health OPD service at regional hospital and community hospital level and IPD at Regional Hospital (RH) and Regional Referral Hospitals (RRH)) by December 2021. This to include an increase of 4-6 beds and one OPD for mental illness from the current zero
5. Ensure procurement of psychotropic medicines and the distribution of adequate psychotropic medicines to all Health facilities providing mental health services by Pharmaceutical Eritrea
6. Coordinate with the MoE to integrate a school based mental health program with existing life skill program
7. Conduct developmental and behavioral screening programs at 60 kindergarten schools
8. Train and encourage 300 employers and 300 employees on mental health problem for 2 days at 6 zones

9. Train basic training to 150 HIV/AIDS counselors and ARV information officers on the relationship between mental disorders and HIV/AIDS for 3 days at 6 zones

Table 9: Zonal comparison Morbidity of MNCD from (Jan. – Nov. 2020)

	DM	HTN	CVD	Cancer	Asthma
Anseba	293	448	216	17	687
Maekel	826	2102	267	25	1008
NRS	342	411	145	11	822
SRS	218	190	38	4	309
GB	727	1240	360	27	1517
Debub	756	1322	543	21	1203
Referral	2193	1950	2352	490	1494

Table 10: Zonal comparison Mortality of MNCD from (Jan. – Nov. 2020)

	DM	HTN	CVD	Cancer	Asthma
Anseba	1	0	15	4	0
Maekel	0	2	33	2	2
NRS	0	1	4	0	1
SRS	3	0	8	0	0
GB	2	3	13	2	1
Debub	8	0	31	3	1
Referral	93	4	134	31	5

## 13.0 Environmental Health

The 2012-2016 Health Services Sector Development Program (HSSDP) stated that due to the current and anticipated increments in industrial, agricultural, mining and port among other development activities in Eritrea as well threats from emerging and re-emerging diseases, there is need to scale up interventions in Occupational Health. There is also need of promoting OH services and practices in workplaces with special emphasis on the high-risk sectors.

Accordingly, a unit was established in the Division of Environmental health to plan, implement, and monitor the program. However, not much has been done thus this is another important area that deserves due attention in the second HSSDP (HSSDP 2017-2021). The environmental Health Division in close cooperation with all its units and specially the workplace health and safety unit is committed to improve the health conditions of the working force of the people of Eritrea by introducing standard working and living conditions in the country. Major planned activities of Workplace Health and Safety Unit

1. National Occupational Health and Safety situation analysis conducted.
2. Health risks of climate change are assessed, and document is in place.
3. National Plans of Joint Action (NPJA) on Health & Environment for Eritrea is developed in 2020.
4. A national guideline and adapting tools on climate change developed in 2020.

### 13.1 Implementation Status

The major achievements of WHS Unit on Climate Change and Health in 2020 were;

1. The third national communication (TNC) report which is a requirement to the UNFCCC non-annex I parties was finalized and circulated to UNFCCC for approval.

2. A study on Climate Change sensitive diseases that are associated with water was done. and will be disseminated when the national lock down is lifted.
3. Healthy workplace promotion was conducted in 2020 through multiple channels to the community-health work force and employees and employers.
4. Interview on TV on healthy workplace promotion was done in 2020 through multiple channels to the community, health work force and employees and employers.

### 13.2 Health Care Waste Management (HCWM) achieved activities

Due to the shortage of budget and the COVID-19 global pandemic, there were limited activities in healthcare waste management. As part of IPC, health care waste management was included in the interim guidelines were distributed from WCO plus as part of COVID-19 preventive measures cascade training was given in Zobas.

### 13.3 Climate Change and Health

1. The workplace health and safety unit has been participating in preparing the third national communication (TNC) report as a requirement to the UNFCCC non-annex I parties. The report was completed in 2020 and directed to UNFCCC for approval.
2. Programs of Ministry of Health (Malaria, IDSR, HMIS, NCDs, NTDs, Blindness prevention and control, and vector borne diseases etc) relevant to the subject were communicated.
3. Data related to the health sector was shared to the consultancy firm i.e. the Higher board of education.
4. Health sector's climate change vulnerability impacts and adaptation options document was finalized and incorporated into the TNC.

It has been described that malaria, dengue fever and yellow fever are the main vector-borne disease

concerns that might result due to climate change by the technical working group of the TNC. Moreover, based on desktop qualitative assessment, that are climate change and water related diseases are Malaria, Malnutrition, Diarrhea, Schistosomiasis, Dengue fever and Chikungunya.

## 13.4 Recommended Adaptation Options

Establish/Strengthening Climate Resilient health systems

- Providing policies, guidelines and resources on climate change and health
- Update the existing health policies and develop new policies to meet the current international and national standards

### 13.4.1. Creating awareness and precautions

- Raise community awareness and knowledge on climate change and health
- Increasing the number of trained personnel in climate change and health at the higher learning institutions and research organizations is needed and
- On job training for health personnel related to climate change and health is needed.

### 13.4.2 Strengthening the research capacity on climate change and health.

- Currently there is no expert on climate change and health in the country so in job training and providing technical support to academic and research institutes is crucial.
- The health research centers should be equipped with adequate laboratory facilities and
- Strengthening of national research collaborations related to climate change and health.

## 13.4.3 Vector-borne diseases

- Integrated vector control including environmental management, and indoor residual spray
- Treated bed net distribution and continuous follow-up for their use of insecticide-treated bed-nets
- Malaria case management including early diagnosis and prompt treatment
- Community-based management of malaria by training community health agents
- Ensuring availability of drugs for treatment and laboratory supplies.
- Operational research including malaria surveys, drug sensitivity and drug resistance, entomological studies, etc.

### 13.4.4. Nutrition

- Improving maternal nutrition before, during and immediately after pregnancy
- Early and exclusive breastfeeding for at least six months; and
- Timely introduction of safe, appropriate, and high-quality complementary food for infants, accompanied by appropriate micronutrient interventions.

### 13.4.5. Diarrhea

- Feeding and supply of oral rehydration solutions (ORS)
- Safe and hygienic stool disposal
- Introduction of Water Safety Plans (WSP)
- Household water treatment and safe storage
- Development of climate resilient water infrastructure
- Vaccination including Rota virus



### 13.4.6 A Study on potential climate change sensitive diseases related to water

In Eritrea, the most common CC sensitive diseases related to water resources are water and food-borne diseases (water-based, water-washed and water-related diseases).

#### Recommendation

1. Establishment of climate resilient public health systems
2. Strengthening surveillance, early warning, and communication systems.
  - Health Promotion and Social
  - Determinants of Health

### 13.4.7 Risk Communication and Community Engagement (RCCE): Situation Analysis

On 30 January 2020, the World Health Organization (WHO) declared the outbreak of a novel coronavirus as a public health emergency of international concern. The MoH, in collaboration with development partners, has developed a national COVID-19 Preparedness and Response Plan delineating government, partner and community roles.

Ready communication plays a critical role in the implementation of this national plan. Through communication, transparency and public trust are maintained and appropriate guidance is disseminated, to prevent panic and the spreading of rumors which pose major challenges to the management of COVID-19.



Above: The late Dr. Theodoros Tekeste Ghebreab facilitating a traffic safety program for school children in Asmara, Eritrea

To ensure the implementation of the national plan, a multiparters Risk Communication and Community Engagement (RCCE) Committee has been established under the Health Promotion Division of the MoH. This committee will continually provide oversight and conduct quality assurance of the implementation process.

At the subnational level, the RCCE committees are responsible for the adaptation and promotion of existing mitigation measures, while the provision of essential services continues as usual. The RCCE Committee will coordinate population sensitization and activate mechanisms for gathering community feedback and for tracking rumors. A multi-channelled strategy will be used to implement the activities that will be coordinated by the RCCE Subcommittee under the general guidance of the COVID-19 National High-Level Task Force.

The following strategies were taken to accelerate the implementation of the activities:

1. **Advocacy:** The objective is to raise awareness and commitment at national level to mobilize resources (human, material and financial) and gain commitment to contain the COVID-19 pandemic.
2. **Information and outbreak announcements:** Announcements of outbreaks will come through the COVID-19 High-Level Task Force only. Any information, communication and education aimed at behavioral practices should be developed/reviewed by the RCCE Subcommittee so that its dissemination can be supported by the mass media, thus maintaining public trust by using appropriate channels.
3. **Mixed communication channels:** Continuous training/sensitization of partners and stakeholders is needed at various stages of the pandemic to create national awareness and build broad-based partnerships. Community health workers, school health promoters, social workers, etc., who link the communities and service providers will be provided with up to date COVID-19 information.

4. **Communication for behavioral change:** The structures established at each level are equipped to take the lead in the RCCE activities and to ensure 'two-way' communication. While messages will be developed by the National Level Risk Communication and Community Engagement teams to ensure uniformity, community mobilizers will focus on tools that conform to the cultural and social ethos of different communities to prevent and reduce COVID-19 transmission.

5. **Community engagement:** There are over 30 thousand behavioral change communication peer facilitators, integrated management of newborn and childhood illnesses promoters, malaria agents, water, sanitation and hygiene promoters, teachers, community health workers, etc., at community level, 125 thousand youth members, 300,444 women members, over 2,700 anti-female genital mutilation committees, 67 sub-Zoba level child wellbeing committees and over 1 thousand school health focal points, all of which will be activated to initiate and sustain dialogue with communities during the preparedness, prevention and response stages of the pandemic. The change agents were activated (especially the behavioral change communication peer facilitators, sanitation and hygiene promoters, teachers, community health workers, youth members; women members and the school health focal points) and are actively engaging in the community.

### 13.4.8 Implemented RCCE Activities

1. Rapid Need Assessment for Risk Communication and Community Engagement on COVID plan developed and conducted in March 2020 as a base for the community engagement plan.
2. Eritrea risk communication and community engagement for COVID-19 response developed and implemented.
3. Community influencers (leaders, women's, youth, artists, law enforcement) engaged and mobilized communities to comply with preventive measures. According to the 2020 mid-line KAP survey, 99.9

percent of the participants have knowledge and awareness on COVID-19 and 73 percent comprehensive knowledge of at least three signs and symptoms.

4. Local governments and relevant authorities engaged to provide essential services to address social and economic impacts on COVID-19. All governors were engaged in the advocacy
5. Regular national updates and timely alerts on community transmission to help the public improve understanding of risks and susceptibility
6. Rumors monitored and managed to mitigate mis and disinformation
7. Daily advocacy by media hubs and influential figures to increase awareness on reducing stigma, address misinformation, and promote behavioral change and social responsibility.
8. COVID-19 KAP Survey conducted the source information for COVID-19
  - 75.9 percent Radio/Television
  - 39.4 percent Community-based platforms
  - 38.2 percent Health workers
  - 35 percent Eritel 600/601
  - 4.2 percent 24/7 call center
9. In the 2020 mid-line, a COVID-19 knowledge, attitude, and perception (KAP) survey among the general public in Eritrea was conducted in 2020 and published.
  - 99.9 percent of the participants have COVID-19 awareness/ knowledge and
  - 73 percent comprehensive knowledge of at least three signs and symptoms

### 13.4.9 Conclusion

**Drivers to positive behaviors:** Access to information, knowledge, positive attitude, and risk perception

The survey was important in understanding the level of knowledge, attitude, and perceptions of the public towards COVID-19. The findings suggested that majority of the population have an acceptable level of knowledge on signs and symptoms as well as on ways of protection from COVID-19. Higher levels of knowledge on signs and symptoms as well as ways of protection was also found to be associated with higher level of confidence and positive attitudes towards the disease.

Hence, these findings, complemented by an enabling environment, could be key drivers to bring positive behavioral change among the public in practicing ways of protection from COVID-19 infection such as hand washing, respiratory hygiene, and self-isolation for suspected cases.

**Barriers:** lower level of comprehensive knowledge, level of risk perception, and level of confidence. There are, however, segments of the population with lower level of comprehensive knowledge on COVID-19 including, particularly, respondents from Zobas Gash-Barka and Anseba, and those in the youngest age group (below 25 years).

Moreover, a higher proportion of the respondents in Zobas Maekel, Debubawi Keih Bahri, and Debub; those in the older age categories (45 years and above), and females believed that there is treatment for the disease. 16 percent of the respondents, with significantly higher proportion in Zoba Anseba, at 23.4 percent and those in the youngest age group at 20.4 percent, reported that they were not at risk of contracting the disease. Furthermore, a considerable proportion of the respondents in Zobas Anseba and Debub, those with no comprehensive knowledge on COVID-19, and those below 34 years of age reported that they were not confident of preventing infection from the disease.

Lack of sanitation materials and face masks were among the main reasons mentioned by respondents who were not confident to prevent the disease. Radio and/or Television were found to be the most common sources of information about the disease.

### 13.4.10 Recommendation

RCCE efforts should address the following issues:

1. Consistent messaging and tailored health education programs to further improve the level of knowledge, attitudes and perceptions of the general public in Eritrea so as to bring behavioral change among the general public in properly practicing the ways of protection from COVID-19 infection such as hand washing, physical distancing, mask wearing etc. across all aspects of daily life.
2. Proactive approach and focus on dispelling misinformation in the form of conflicting opinions and incorrect information.
3. Involvement of key influencers such as humanitarians, service providers, religious and community elders, political and armed forces, and youth groups in an effort of enhancing the level of knowledge, attitude, and perception on the disease as well as advocating and promoting positive behaviors of wearing masks and physical distancing in areas such as markets and funerals.
4. Giving emphasis to the segment of the population that have lower level of comprehensive knowledge on COVID-19, lower level of confidence to prevent infections, and wrong belief that there is treatment for COVID-19
5. Studies done in other countries revealed that there are confirmed COVID-19 cases that are asymptomatic. Therefore, education materials developed in Eritrea should consider and revise materials to cover these new developments (this has been put in to action and will be finalized in Q2 of 2021). Similar future studies in the country should include items measuring practices of respondents on the different ways of protection. There is a need to conduct similar studies based on more systematic and

inclusive probabilistic sampling method so as to get more representative and reliable estimate of the level of knowledge, attitude, and perception of the general public towards COVID-19 in the country.

### 13.4.11 National response efforts should address the following issues

1. Enhance the use of different communication channels, both mainstream and social media, to better reach the public with important messages related to COVID-19.
2. Ensure availability of sanitary materials and face masks as well as provide a clear guidance on the use of face masks.
3. Share information on daily status of national outbreak response through mainstream and social media channels.
4. Encourage community influencers such as humanitarians and authorities to lead by example on following the COVID-19 measures.

### Achievements

1. At the onset of the COVID-19 Pandemic, to strengthen the existing national multi-sectoral RCCE platform, the WHO provided technical support to the existing national multi-sectoral RCCE platform and strengthened The committee includes the Ministries of Health represented by the Advisor to the Minister and Health promotion Division, Ministry of Information, Students and Youth Associations, Women's Association, Ministry of Defense, WHO and UNICEF.
2. The WHO provided technical support on the development of the National and sub-national RCCE response and implementation plan based on rapid preparedness assessment
3. Technical support was provided for better information access to the public through community and media engagement on development and distribution of relevant risk communication materials and tools. As a result, there was high community engagement and support.

4. Interim guidelines, WHO OPEN video offline Risk Communication courses and teaching materials was shared as part of capacity building
5. Guidance and key messages for COVID-19 were developed in Tigrigna and distributed.
6. The technical support was provided for the implementation of the plan both at national and sub-national levels which includes Zoba Administration, Ministries of Education, Information, Defense, Immigration Affairs, Cultural and Religious Affairs, Youth, Women and Workers Association, Police, 'Baito' and Assembly and Eri Telephone
7. A 24/7 call center operated by the RCCE was established and helped the community on coordination, contact tracing, linkages with treatment center and quarantine sites, dealing with difficult conversations, referral to ambulatory services and daily updates on global, regional and country level COVID status. Information received was fed into the mainstream media to continually mitigate and address COVID-19 related fears, rumors and , misinformation within the community. Feedback received through the call center is being used to track misinformation and adjust media programmes accordingly
8. One-directional sensitization reached an estimate 2.8 million people (80 percent of the population). SMS and audio messaging via EriTel registered users reached an estimated 2 million people. Printed materials; 300 tv and radio spots on COVID-19 prevention & continuity of immunization services were produced and disseminated. An offline mobile application as RMNCAHN services and vaccination scheduler/ reminder.
9. Community engagement using community health workers/ barefoot doctors and /one-to-ten youth/ women approach reached an estimated 1.2 million people reached, with a focus on an outreach strategy targeting hard-to-reach mobile communities, returnees etc.
10. Technical support was provided to develop COVID-19 prevention, safe school opening SOPs, guidelines, psychosocial support materials etc.

11. RCCE in collaboration with the Ministry of Education established an Emergencies national committee for COVID-19 prevention in preparation for safe school opening
12. The RCCE and EIE also prepositioned back-to-school radio and TV spots and supplementary cocurricular materials were developed in the forms of comic book, reader, wallchart and cartoons.
13. The RCCE developed social diagnostics tools to conduct midline assessment of the COVID-19 response. 2000 contact tracing job aids in Tigrigna were developed, printed and distributed to quarantine sites, hospitals, institutions and hot spots areas
14. In collaboration with the Health Promotion Division, UNICEF and WHO supported the development of health messages for the integrated COVID-19 prevention and continuity of essential health services in areas of chronic NCDs, Mental health, Reproductive Health, Maternal, Neonatal, Child and Adolescent Health
15. Guideline and videos were in nine local languages explaining the proper usage of a mask as well as reasons for wearing one
16. At the sub national level, the MoH in collaboration with NUEYS and NUEW, using appropriate infection prevention protocols, continues to sensitize communities on COVID-19 using megaphones and printed IEC materials. At least 86 thousand COVID-19 fact sheet have been printed in all 9 local languages for use by youth mobilisers to reach communities in all six Zobas.

### Challenges

1. Limited funding
2. Difficulty to supervise the Zobas because of the lock down measures

### Good Practice

Comprehensive COVID-19 Risk Communication and Community Engagement (RCCE) resource package guidance has been developed and shared with MoH and partners:

1. Risk Communication and Community Engagement (RCCE) action plan Guidance COVID-19 Preparedness and Response
2. Risk Communication and Community Engagement (RCCE) Readiness and Response to COVID-19
3. Risk Communication and Community Engagement (RCCE) Global Partners strategy

4. COVID -19 Community Guidance for social mobilizers, community workers, volunteers
5. COVID-19 Stigma Guide
6. Focal Group Discussion Guide for Communities



Group photo of WHO Team and Ministry of Land, Water and Environment in Asmara, Eritrea on occasion of stakeholder engagement to lobby for development of the National Water Safety Strategic Plan



The late Dr Theodoros Tekeste Ghebream facilitating a Water Quality Assessment training for the Maekel Zoba (Region) Water Authority.



Above: WHO Staff in an outreach program in Asmara, Eritrea in 2020. The late Dr Theodoros (first left) and Dr Yohannes (4th left) attended the event before their untimely demises.



Above: WHO Staff in an outreach program in Asmara, Eritrea in 2020.

## 14.0 WHO Eritrea Country Support



Internal WHO Planning Meeting to accelerate implementation of GPW13 Goals in Eritrea

The WCO responded to partners needs in a timely manner and played a decisive role in priority and target settings. The MoH was supported technically with catalytic funding given for some of the national programs. The WCO is innovative in brokering solutions with its partners and ensuring that solutions comply with WHO rules. All the 3 levels of WHO and the national authorities were consulted when policies and business processes including the Functional Review were developed. The WCO adopted multi-sectoral approach during the Biennium Plan and workplan implementation.

The WCO is currently developing guidelines to mainstream GER into programs and processes and will lobby the national authorities to mainstream GER into its programs. Data disaggregation remains a challenge with a need for the WCO to beef its human resources by recruiting a Strategic Health Information Officer at P3 who will also build capacity of the national authorities.

The WCO has adopted health in all policies as a way of leaving no one behind in all its interventions and continues to work with the national authorities to prioritize reaching previously hard to reach population in rural areas. A different mix of interventions has been developed to reach different target groups and the interventions are agile enough to suit different needs of partners and targeted population. The WCO planning

strategy is based on an agile program management concept and planning is bottom up as a way of achieving maximum impact with interventions including the GPW13 and SDG targets in the country.

The WCO has strengthened its performance management system and accountability framework to ensure that results are achieved using interventions that give value for the money invested. The WCO continues to provide leadership in coordinating health partners and building external relations with other partners as a way of driving the impact of GPW13 and SDG strategic goals in Eritrea.

The WCO ensures that the health agenda is promoted at all levels and the impact of all health interventions is aligned to the Eritrean country priorities as captured in the HSSDP III, CCS and UNSDCF. Monitoring and evaluation of programs and interventions is done on a regular basis as a way of identifying gaps and strengthening the capacity of the WCO and partners.

## Pictorial



MOH and WHO Joint-Workplan implementation meeting held in the Ministry of HEALTH. The standing half-yearly meeting is jointly chaired by the State of Eritrea Hon Minister of Health and WHO Country Representative



Dr Hillary Kipruto from the WHO IST office facilitating a consensus building training on adoption of indicators to be used for monitoring the Health Sector in Eritrea and tracking of Health SDGs, UHC and GPW13 indicators.





# WHO Eritrea Biennium

## Report 2020 - 2021

### Consolidating Achievement of UHC in Eritrea

WHO Country Office in Eritrea  
Adi Yacob Street No.173, House No.88/89,  
Geza Banda  
P.O. Box 5561, Asmara, Eritrea  
Tel: +291 11 41 71 /75 /67  
Email: [motswagolej@who.int](mailto:motswagolej@who.int)

Health workers conducting a surgery at Orotta National Referral Hospital in Asmara, Eritrea. Photo © WCO Eritrea, 2021

